Communications Engineer

NETWORKS DATACOMMS

SEPTEMBER 1992

HARDWARE SOFTWARE

Agreement Number N0012-016P

Powerful tests for digital mobile comms

Anritsu of Japan has released several powerful test instruments for the expanding field of digital mobile communications.

Available from Alcatel Australia, the equipment range includes digital modulators and analysers.

The MS3650 digital modulators cover the 800MHz to 2.7GHz frequency range, generating both digital quadri-phase shift keying (DQPSK) and gaussian filtered minimum shift keying (GMSK), to support the most popular modulation techniques in a single unit.

They feature a synthesised signal generator for use as a standard modulated signal source for adjusting and testing receivers and demodulators, as well as for signal analysis.

A built-in modulation signal generator provides functions for generating 0000 and 1111 fixed patterns, as well as PN9 and PN15 pseudorandom patterns as modulation signals.

Transmission rates from 32 to 320K bits/s can be selected for the MN3650 Models A and B, and up to 384K bits/s for the MN3650C.

An external serial data input is also provided for generating modulation signals in any desired pattern. Baseband signals can also be output from the rear panel as I and Q signals, and since balance and offset adjustments are provided, these signals can be used in evaluating, testing and simulating devices that use quadrature modulation.

Other features include an optional burst function for testing base and mobile stations (especially in GSM applications), and the ability to accept external I and Q systems to meet additional modulation techniques such as 8PSK and 16QAM.

Also available is the ME2627A digital modulation analyser. Consisting of an MF8601A digitiser, MG3633A synthesised signal generator and a high speed workstation, this unit makes a useful companion to the MN3650 digital modulators.

The modulation analyser will analyse and measure a range of digital system parameters, such as frequency/phase error, modulation accuracy and amplitude envelope measurements.

For further information contact Alcatel Australia, 58 Queensbridge Street, South Melbourne 3205.

100 on Information Card

Philips gears up for ISDN manufacture

After winning significant new contracts with Telecom Australia, Philips PTS (Public Telecommunication Systems) is preparing to start local manufacture of ISDN terminal adapters at its NSW facility, located at Moorebank in Sydney's west.

From November, all Telecom' ISDN terminal adapters will be fully Australian manufactured at the Moorebank factory.

Philips PTS marketing manager for this equipment, Garry McCarten, says the company is also confident of winning export sales for the equipment as ISDN takes off in the Asia Pacific region.

Around 8000 of Philips PTS's first generation of adapters have already been sold. The company is now preparing to launch a new generation, known as TA-Multi, which it will be supplying to Telecom.

There are two basic models of the TA-Multi, the Model 2D which offers two data connections, and the Model 2D2A which supports two data and two telephone connections.

Philips PTS says the Model 2D2A is a locally-inspired design, produced to serve the needs of small chain business such as Seven-Eleven stores and service stations.

These stores typically require a cash register data connection, EFTPOS terminal and one or two telephones, all of which are supported by the TA-Multi 2D2A.

QPSX technology strengthens in the US, European markets

QPSX Communications is enjoying success in the US with the recent launch of commercial networks based on its technology by SAIC and Washington-based MCI Communications, along with signing of evaluation contracts with three major US carriers.

Siemens, one of QPSX's two international licensees, supplied products for four of these contracts, while Alcatel, the second licensee, negotiated the Science Application International Corporation (SAIC) deal. SAIC is offering a national cell relay service on WinTel's fibre optic network.

Southwestern Bell will use two QPSX broadband cell switch systems in a laboratory evaluation of metropolitan area networks (MANs) in St Louis, and Pacific Bell will conduct a switched multi-megabit data service evaluation in its laboratory in California.

Ameritech is evaluating the system with data network operator, CICnet in Chicago, and aims to offer a commercial service in Illinois and Michigan this year, and Ohio and Wiscons by the end of 1993.

Southwestern Bell and Ameritech regional Bell operating companies (ROBCs) are also evaluating other technologies, but QPSX is confident that they will follow the lead of RBOC Bell Atlantic, which launched North America's first QPSX-based commercial service earlier this year in Philadelphia.

As well, QPSX announced that only after first seven months of the three year evaluation project, Germany's Deutsche Bundespost Telekom is considering proposals to install connectionless broadband data services in every major city in Germany and introduce a fully commercial service as early as next year.

British Telecom also plans to launch a commercial service next year, after establishing a pilot network late last year.

While back home, Telecom Australia will soon be officially launching Fastpac, a high speed data telecommunications service based on the QPSX technology.

Frame Relay service goes online in New Zealand

New Zealand has taken the lead in public Frame Relay services in the Pacific area, with the installation of a system for Telecom NZ subsidiary Netway.

The StrataCom Frame Relay system was installed by Digital, and is expected to provide faster, more flexible and more reliable data connection to NZ users.

According to Digital, the Telecom NZ system involves the installation of intelligent high speed switching technology in five main centres, allowing business to distribute data between LANs at distant sites.

Large volume bursts of data are accommodated by the Frame Relay system seeking extra network capacity for the load.

"We evaluated a number of systems, but there is no doubt that the StrataCom system is accepted as the best", said John Lynch, Telecom NZ's Frame Relay product manager.

"It has been adopted by the major telecommunication suppliers in Europe and North America."

Easy upgrades to the StrataCom system allow it to support the technology required to implement broadband services.

Telecom NZ and Netway have been trialling Frame Relay for TuiaNet, New Zealand's national network of research and educational organisations, since April.

A pilot service for TuiaNet began in July, and commercial services are expected later this year.

Scientific-Atlanta Aust wins Indonesian VSAT order

A $10 million subcontract to supply Indonesia with weather data monitoring equipment has been awarded to Scientific-Atlanta Australia.

The contract involves monitoring data from some of Indonesia's most remote areas.

Scientific-Atlanta Australia will be supplying a solar powered VSAT (very small aperture terminal) network to the country's Bureau of Meteorology and Geophysics. The equipment forms the communications portion of a $26 million prime contract awarded to Television Australia Satellite Systems.

The VSAT system will return the data needed for forecasting weather patterns, including potential natural disasters. This data includes river heights, flooding, wind velocity and drought affecting both the Indonesian archipelago and neighbouring countries.

Weather forecasting in Indonesia is complicated because there are 13,000 islands spread over 5000km, with terrain varying from sea level to mountains 4000m high.

Because they are solar powered, the VSAT terminals being supplied by Scientific-Atlanta can operate as self-contained units wherever they are installed, simplifying the task of collecting the location-specific data needed to accurately predict weather patterns.

The system includes a 4.5m C-band hub station to operate as a central collection point for all data, and 400 remote VSAT stations, each interfacing with data transmission equipment.

Information is transmitted using a PALAPA satellite.

Data logging equipment connected to the remote VSATs continually gathers a variety of data, such as rainfall accumulation, temperature and other weather pattern indicators, with data transmitted to the hub at regular intervals.

Scientific-Atlanta says the remote VSAT units differ from traditional VSATs in that the remotes spend more time inoperational than operational.

While the remotes are off, the critical communications setup information is stored in battery-backed RAM; the attached data collection equipment continues to gather information while the satellite terminal is inoperative.

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New business unit to bring Auspex servers to Australia

Dawn Technologies has formed a new business unit, Auspex Systems Australia, to market the Auspex range of high performance network file system (NFS) servers in Australia and New Zealand.

The new unit includes a sales and marketing force which will focus on selling the products to Unix users, and providing follow-on service and support.

David Hariman, vice president of sales and marketing for Dawn Technologies, is responsible for Auspex Systems Australia (ASA).

ASA has been awarded exclusive rights to market the Auspex servers in Australia and NZ.

The NFS servers support up to eight Ethernet networks, and from 20 to over 100 workstations per server. According to Auspex, the servers can handle heavy NFS loads with no degredation in performance.

"Dawn Technologies is a value added reseller of peripherals in Australia to such major computer companies as Sun Microsystems, NCR and Fujitsu," Mr Hairman said.

"Initial plans are to target Sun and Fujitsu sites that have more than 50 workstations.

We estimate that there are as many as 80 sites in this category, and only Auspex network servers provide the high data availability and expansion options these users seek," he said.

The company anticipates sales of over $3 million in its first year of operation.

Auspex product manager John Dunham described Australia as "a particularly promising market."

"It has a highly urbanised population with a disproportionately large electronics and communications market," he said.

"Because cities are widely dispersed, data communications and networking are vital technologies."

Insearch provides on-line information service

Insearch, a commercial division of the University of Technology, is assisting industry and other sectors make informed strategic decisions through its DIALOG on-line information service.

"Through DIALOG, users can acquire the precise information they need to gain competitive edge and to make the best decisions throughout their product's life cycle," said Robin Kench, operations manager for Insearch.

DIALOG provides a wide range of databases on specific sectors of the economy, business, science and technology. The information is constantly updated with up to the minute news coverage.

Connection to DIALOG on-line information service is via a modem, using a communications software on a PC or terminal. A DIALOG password is required to access the system.

Insearch is the Australian and New Zealand agents for the California-based DIALOG.

SunSelect helps integrate Novell

Sun Microsystems has released a product designed to take advantage of the 25% of Sun sites that also have Novell networks installed.

NetWare. Sparc and Solaris environments can now be integrated into a single system using the NetWare SunLink software, recently released by the company's SunSelect business unit.

NetWare SunLink allows DOS, Windows and OS/2 NetWare system users to share data, files and print services with Unix system workgroups.

Based on Novell's NetWare for Unix Version 3.11, NetWare SunLink provides easy movement from a departmental network to an integrated Sparc/Solaris environment.

By adding the software on a Sun SparcServer system to the network, NetWare customers can protect their existing network while gaining direct access to Unix system files, applications and services, including distributed processing, client-server computing and open systems.

"NetWare networks are installed in more than 25% of Sun customer sites," said Jan Newman, executive vice president of Novell's NetWare Systems Group.

Two leading database vendors, Oracle and Ingres, have announced plans to support the product. Oracle will offer its latest Oracle7 RDBMS and SQL*NetV2 networking products for NetWare SunLink.

Ingres says it will be supporting the product in Version 6.4 of its RDBMS software package, to be available early next year.

Sun Microsystems Australia, 828 Pacific Highway, Gordon 2072.

BRIDGES, UPS & NIC's

Local & Remote Bridges

		RETAIL (ex-tax)
ELB-1000	Ethernet LOCAL Bridge with; Spanning tree Two AUI cables Power cord and installation guide	2960
ELB-2000	Ethernet LOCAL Bridge with; InterVIEW Two AUI cables one RS232 cable Power cord and installation guide	3560
LB-2012	SNMP Option for ELB-2000	1750
ERB-3000	Ethernet REMOTE Bridge with; InterVIEW One remote link cable One local AUI cable One console cable Power cord and installation guide	4840
ERB-3033	SNMP option for ERB-3000 (ROM-Boot)	1720
ERB-3043	SNMP option for ERB-3000 (TFTP down-load)	2260

Token Ring

Network Interface Cards

LCS-8835	8-bit 4 Mbps NIC, Type 1 & 3 cables (RJ-11)	480
LCS-8836	8-bit 4/16 Mbps, Type 1 & 3 cables (RJ-11)	825
PTC-6016	16-bit 4/16 Mbps, Type 1 & 3 cables (RJ-11)	870

Multistation Access Units (Hubs)

LCS-883M-1	8 Port MAU, 4 Mbps, Type 1 cables (AMP)	615
LCS-883M-2	8 Port MAU, 4 Mbps, Type 3 cables (RJ-11)	585

Intelligent UPS Systems

System 1

5200-610-1	600VA Intelligent UPS	1335
6200-810-1	800VA Intelligent UPS	1470
7200-120-1	1200VA Intelligent UPS	1905

Applicable Operating System;
MS/PC DOS V3.6 or above
LAN MANAGER V2.0 or above

System 2

5200-610-2	600VA Intelligent UPS	1350
6200-810-2	800VA Intelligent UPS	1500
7200-120-2	1200VA Intelligent UPS	1920

Applicable Operating System;
NetWare 286 V2.1x or above
NetWare 386 V3.xx or above

System 3

5200-610-3	600VA Intelligent UPS	1410
6200-810-3	800VA Intelligent UPS	1725
7200-120-3	1200VA Intelligent UPS	1965

Applicable Operating System;
SCO XENIX System V/386 R 2.3.2
SCO UNIX System V/ 386
UNIX System V / 386 R3.2 & R4.0

System 4

5200-610-4	600VA Intelligent UPS	1485
6200-810-4	800VA Intelligent UPS	1620
7200-120-4	1200VA Intelligent UPS	2055

Applicable Operating System;
SUN OS V4.03, V4.11
IBM AIX, HP-UX, DEC ULTRIX

ALLOY

A.C.N. 006 507 473

Alloy Computer Products (Australia) Pty. Ltd.
5 Enterprise Court, Mulgrave, Victoria,
Australia 3170
Tel: 03-561-4988 Fax: 03-561-7412
BBS:03-560-3902

Ethernet (Coax)

Network Interface Cards		RETAIL (ex-tax)
ELAN-308	8-bit NIC - 3COM 3C501 Type	165
PTC-1000	8-bit NIC - NE1000 Type	150
LCS-8834	8-bit NIC - NE1000 Type	180
PTC-1001	16-bit NIC - NE2000 Type	165
LCS-8634	16-bit NIC - NE2000 Type	210
E2000M	16-bit MCA NIC - NE/II Type	405

Western Digital Compatible

PTC-4000/8	8-bit NIC, 8K buffer - WD 8003E/EBT Type	165
PTC-4000/32	8-bit NIC, 32K buffer - WD 8003E/EBT Type	180
PTC-4001	16-bit NIC, 16K buffer - WD 8013/EBT Type	210

Parallel Port Laptop Adapters

PE-1200	BNC Pocket LAN Adapter	390
PE-1200AUI	AUI Pocket LAN Adapter	390

Transceivers

PTC-MAU-C	AUI to BNC Transceiver	75
LCS-883T-1	AUI to AMP Transceiver	255

Repeaters

LCS-883R-2	2 Port repeater, 2 AUI & 2 BNC Ports	870
PTC-3000/4	4 Port repeater, 4 BNC & 4 AUI ports	1275

Ethernet (10Base-T)

Network Interface Cards

PTC-1000T	8-bit NIC - NE1000 Type	180
PTC-1001T	16-bit NIC - NE2000 Type	195

Western Digital compatible

PTC-4000T/8	8-bit NIC, 8K buffer - WD 8003E/EBT Type	180
PTC-4000T/32	8-bit NIC, 32K buffer - WD 8003E/EBT Type	195

Parallel Port Laptop Adapters

PE-1200TP	RJ-45 Pocket LAN Adapter	390

Transceivers

PTC-MAU-T	AUI to RJ-45 Transceiver	75

Multiport Hubs

PTC-3004T/B	4 Port hub, 4 RJ-45 ports (internal card)	405
PTC-3008T	4 Port extension for PTC-3004T/B	75
LCS-883RT6	6 Port hub, 6 RJ-45 ports, 1 BNC, 1 AUI	465
LCS-883RT8	8 Port hub, 8 RJ-45 ports, 1 BNC, 1 AUI	615
LCS-883RT	12 Port hub, 12 RJ-45 ports, 1 BNC, 1 AUI	1125

Ethernet Combo and EISA

Network Interface Cards

1300-000	16-bit NIC, AUI/Coax/10Base-T, NE2000 type	255
1500-000	16-bit NIC, AUI/Coax/10Base-T, WD8013 type	270
OA-201	32-bit EISA Bus Master, AUI/Coax/10Base-T	660

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CAB AUDIT

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A member of the Reed International group

NetManage agency gives Chameleon to MM Data

MM Data Networks has announced an agreement with US-based NetManage that gives MM Data the first distribution rights to the company's ChameleonNFS TCP/IP applications package for Microsoft Windows.

Developed specifically for the Windows environment, ChameleonNFS brings Windows' flexible multitasking capabilities to TCP/IP applications.

Both IBM and Microsoft has licensed the technology to develop TCP/IP applications to run under Windows.

ChameleonNFS is based on Windows' DLL (dynamic link library), unlike non-Windows applications which are written as TSRs. TSR-based TCP/IP applications can consume between 80 and 150Kb of base memory, according to MM Data.

The package also includes which MM Data Networks believes is the first NFS server running transparently on Windows.

"ChameleonNFS combines an NFS client and server on each PC, thus providing the ability to create a low cost peer to peer network, in addition to its powerful host connectivity," said Kevin Hartin, marketing manager at MM Data Networks.

"The application allows users to mount and un-mount network drives inside Windows, and the network drives will be recognised by any Windows application.

"It will allow multiple TCP/IP sessions to run concurrently, and contains built-in SNMP agents for DOS and Windows," Mr Hartin said.

Because it is not a dedicated server, ChameleonNFS runs in the background of the operating environment and occupies only 6Kb of base memory. The client and server run concurrently on each PC, and operate under Windows 3.0 or 3.1.

GDC, CrossCom in joint development agreement

General DataComm (GDC) of the US has announced a joint development and marketing partnership with LAN internetworking manufacturer CrossCom.

The partnership will combine CrossCom's URA (universal routing architecture) with GDC's WAN technologies to produce a broad range of products aimed at large corporate users.

Based on multiple Risc processors, the new products will feature software to support SNA routing, Frame Relay, and a variety of LAN protocols.

GDC's chairman and chief executive Charles Johnson said the agreement "will accelerate GDC's thrust into evolving communications technologies.

"Adding CrossCom's expertise in the LAN environment to GDC's expertise in wide area networking will produce a superior LAN/WAN solution for our customers," he said.

The partners plan to release the first generation of their new products in early 1993.

Their partnership includes a $US10 million extension to the existing OEM contract for CrossCom's URA-based products, which GDC markets as its LAN*TMS family.

Consultel to implement $1.5M Adelaide network

Consultel has been appointed consultant to implement a new four-campus communications network for Adelaide University.

The organisation is currently evaluating tenders for the $1.5 million network, which is due to be commissioned in 1993.

The appointment follows Consultel's implementation of new communications systems at Flinders University in 1989 and the University of South Australia in 1991.

There are more than 3000 extensions to be linked in the Adelaide University project, covering its City, Waite, Roseworth and Thebarton campuses.

Features of the network are to include advanced network management and ISDN public network connections. Digital inter-campus links will initially carry voice, data and fax traffic, with video to be supported in the longer term.

Centralised operators, call queueing and voice mail are to be included in the network, which will use a closed numbering plan.

Software Developments teams up with Hitachi

Software Developments' latest technology and marketing agreement with Hitachi allows the NET/Master network and systems management software to be adapted to the VOS3 operating system used on Hitachi mainframe computers.

John Robinson, managing director for Software Developments in Japan, says this partnership, along with a similar agreement signed with Fujitsu in 1991, gives the company an opportunity to establish itself as a leader in multivendor systems and network management.

"Our new alliance with Hitachi helps us to develop new products better targeted to the requirements of our customer in Japan, which when combined with the Asia/Pacific market amounts to approximately one third of our total market," said Mr Robinson.

The development work will be undertaken by Software Developments in its Sydney headquarters.

A communication link from the company to Hitachi's data centre in Tokyo will enable code to be developed and tested.

The resulting version of the NET/Master product will give Hitachi customers a range of command and control of network functions.

As well, customers will be able to customise applications using NET/Master network control language (NCL) software.

Sydney office for SynOptics

Strong growth in Australian market share over the last twelve months has led SynOptics to open new offices in Sydney.

The Sydney premises, SynOptics' 42nd office worldwide, are located at Suite 714, Level 7, Konica Building, 275 Alfred Street, North Sydney 2060.

The phone number for the office is (02) 931 6895, fax (02) 931 6897.

The office is to managed by Sandor Kovacs. who was recently appointed as the company's northern region sales representative.

Mr Kovacs will be responsible for providing sales and marketing support to SynOptics customers in NSW, Qld, NT and the ACT.

Telecom commits to Windows

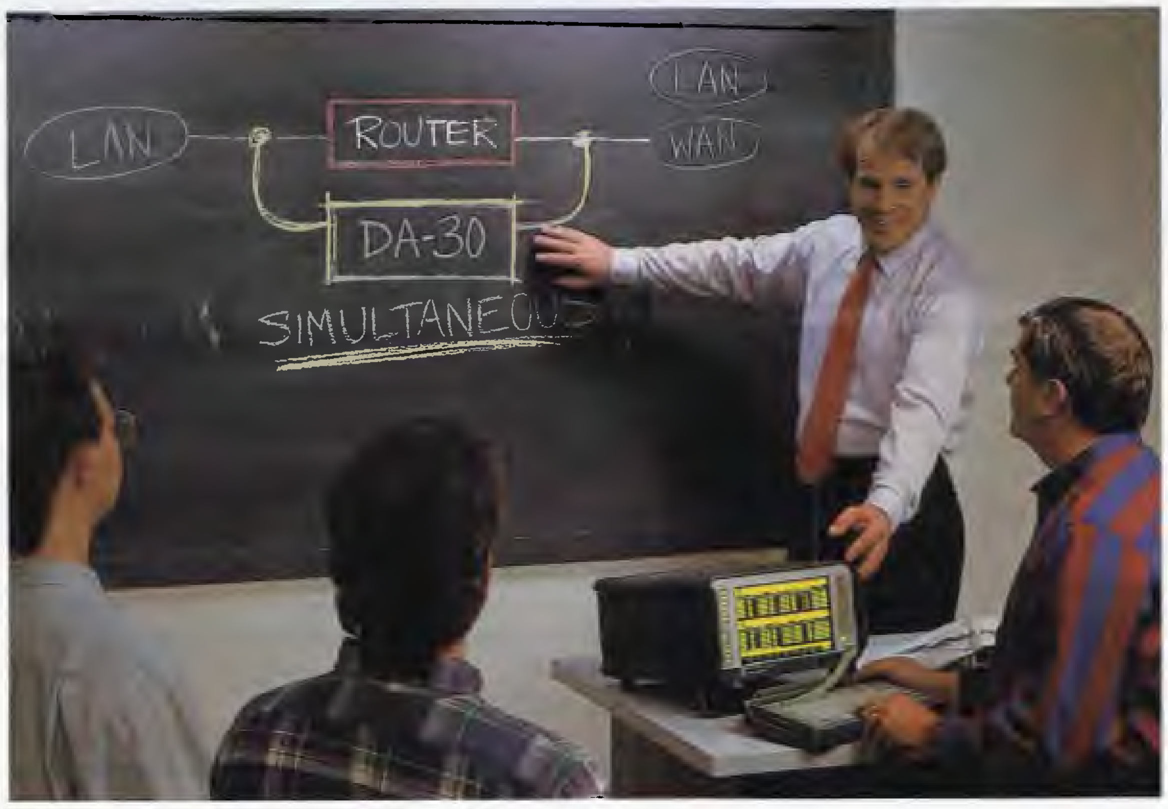
Telecom has taken delivery of Microsoft's largest ever Australian software shipment, as part of a multi-million dollar corporate agreement which will see Microsoft Windows installed on 25,000 of Telecom's PCs.

Packages in the shipment also included Word, Excel, PowerPoint and Project, as well as copies of MS-DOS 5.0.

The deal is part of Telecom's move towards a standard PC operating environment to improve productivity.

Telecom is already believed to be the largest Microsoft Mail site in the world, and the agreement will make it one of the largest Windows users.

If You Have A Bridge Or Router…



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Electronic Measurement Technology

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Ipex grows in Queensland

The Ipex Information Technology Group has established three new offices in Northern and Central Queensland in a further move to strengthen its presence in Australia.

In preparation for this expansion, Ipex recently consolidated operations with a head office relocation to a combined office and assembly plant in Sandringham in Melbourne.

The company now has offices throughout Australia, New Zealand, Taiwan. Germany, Russia, Hong Kong and the US.

Ipex's retail operation is targeted at its growing home buyer market, as well as accommodating staff purchase schemes for corporate clients.

Its education area is also increasing by entering higher education areas. Griffith University, Queensland University of Technology and University of Queensland have jointly placed over $300,000 worth of orders with the company over two months.

Ipex specialises in network and software integration, and has been building up its reputation as a systems integrator.

FDDI UTP/STP technology partnership

Cabletron Systems and Crescendo Communications are to jointly develop a technology which the companies say should significantly accelerate the standardisation of FDDI over copper.

The technology involves the incorporation of a three level encoding scheme, along with digital scrambling and equalisation techniques for transmitting FDDI over UTP/STP wiring.

Two of the proposals under evaluation by ANSI include Crescendo's scrambled three level MLT-3 encoding scheme, cosponsored by AT&T, British Telecom, Fibronics, Hewlett-Packard and Ungermann-Bass; and the digitally equalised two level NRZI encoding scheme sponsored by Cabletron and National Semiconductor.

The joint efforts of Cabletron and Crescendo are hoped to reduce emissions and provide better noise immunity.

National sales and marketing manager, Bill Taylor-Mountford said that both companies have put competitive differences aside in an effort to provide a single standard.

Pirelli's 144 fibre cable wins AOTC contract

An Australian developed 144 fibre communications cable has resulted in Pirelli Cables winning a major contract with AOTC.

The company will supply the loose tube fibre optic cable for the inland spur to Sydney, which AOTC is installing as part of the cable network connecting Melbourne and Brisbane.

With a capacity of over 8000 telephone lines per pair of fibres, the newly developed 144 fibre optic cable can carry 600,000 lines. The new cable eliminates the need to install two cables normally required.

The Pirelli 144 fibre cable can also be used for upgrading to four times its current capacity once the associated electronics, already developed to transmit at 2.4Gb/s, is commercially available.

Supplied with a blue nylon outer jacket, the cable is easy to differentiate between copper and optical cable. The company is currently upgrading its entire standard range of loose tube fibre optic cables using this blue nylon material.

Pirelli has also increased the tensile strength of the cable by as much as 70%, making it more robust and easier to install.

More details on the new 144 fibre optic cable is available from Pirelli Cables Australia on (02) 982 3344, fax 982 3648.

Sourceware co-distributorship

In a move to expand its dealer network and provide support services in Australia, Kincolith has appointed Sourceware as its co-distributor of the D-Link range of internetworking products.

According to Kincolith, the presence of D-Link products has grown steadily in Australia and has gained acceptance within large corporate and government sites.

The D-Link range of products are supplied as one vendor network solution to small, medium and large users alike.

In the D-Link product range are Ethernet, 10Base-T, Token Ring, Arcnet, 8, 16 and 32 bit adapters, pocket LAN adapters, hubs, concentrators, bridges, and various software products.

More information on D-Link products is available from Sourceware on (02) 427 7999, fax (02) 427 7255.

In-flight phone service

Air France 747-400 flights from Paris to Tokyo recently introduced an in-flight service using SITA's Satellite Aircom Service.

Air France and Lufthansa are the first airlines to offer this service to scheduled passenger flights, while fourteen other airlines, including Qantas and Air New Zealand, have subscribed to Satellite Aircom.

Aircom passenger telephony allows instant telephone communications anywhere in the world by using an on-board handset, either seat back or bulkhead mounted, and an international credit card. The service costs $US10 per minute, regardless of call destination.

Once the aircraft is logged on to one of the six earth stations operated by the Satellite Aircom consortium, a two way data and voice communications link is established via an Intelsat satellite.

SITA says this digital link ensures the best possible telephone quality, similar to long distance international satellite phone calls.

DEC's partnership commitment recognised

Minister for Industry, Technology and Commerce, Senator John Button has congratulated Digital Equipment Corporation on surpassing its commitments under a five year partnership for development program (PDP).

PDP asks companies to achieve an export ratio which is 50% of their imports. Companies also agree to spend at least 5% of their turnover on research and development.

"DEC has capitalised on two particular strengths of the Australian information industry – world class research and development and advanced telecommunications," said Senator Button.

Digital's commitment was to achieve $100 million in exports and $25 million in research and development in the fifth and final year of the agreement.

It exceeded its commitment by achieving exports worth $110 million and investing over $28 million in R&D.

Over the last five years, the company achieved $238 million in total exports, resulting from integration services and manufacture of telecommunication products, including server terminals, software products, along with other hardware products and components.

The company also invested $72.4 million in local R&D in in-house and external activities, which provided the commercialisation of products for domestic and export markets.

The brilliant new SmartModem™ range from NetComm.

NetComm now brings you the very latest in modems. Providing uncompressed data transmission speeds of up to 14,400 bps, as well as send and receive Fax at 9600 bps, the new SmartModems are a leap ahead of the competition.

The SmartModem range includes two Fax modem products. They come complete with NetComm's PC Fax System Software enabling you to send and receive facsimilies as if your PC was a full Group III fax machine.

Yet, because this happens in the background, your PC is free to complete other tasks.

NetComm are the first to provide both 14,400 bps data transfer and TrueFax™ send / receive capabilities in one modem.

With MNP® 5 and V.42bis providing up to 400% data compression, a theoretical throughput of up to 57,600 bps can be attained. And your data remains secure through password, dial back and DES encryption.

All delivered in an even smaller footprint combining Australian design and state of the art manufacturing techniques to give you greater performance at lower costs.

It's small wonder that NetComm is taking modem design - and Australian business - even further ahead.

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103 on Information Card

Sybase, Microsoft extend client server strategy

An agreement announced by Microsoft and Sybase allows the two companies to extend their co-operative client server strategy for SQL Server to support Microsoft Windows Open Services Architecture (WOSA).

As well, both companies have released the Microsoft SQL Server Software Development Kit for Windows NT to provide advanced SQL Server applications on the new 32 bit Windows NT platform.

"These announcements are the latest results of the extensive work we have been doing with Sybase on SQL Server," said Phil Meyer, Microsoft Australia's software development product manager.

Under the agreement, the companies will jointly develop optimised driver support for the Microsoft open database connectivity (ODBC) API within the framework of the Sybase open client architecture.

ODBC is a means of providing host independent data access services to Windows client applications within Microsoft's WOSA.

"As a working partner, Sybase was a major contributor in the very beginning of the OBDC design effort.

Both companies will continue to work closely together to provide developers with a tightly integrated, scalable platform that offers customers transparent access to enterprise wide information," Mr Meyer said.

The SQL Server Software Development Kit for Windows NT is aimed at both corporate developers and commercial ISVs seeking to migrate Windows-based client server applications to the Windows NT platform.

The kit contains Win32 API-based versions of SQL Server's DB library client interface and open data services API.

Developers can use the kit with Microsoft SQL Server 4.2 or with the 32 bit release of SQL Server for Windows NT, which is still to be released.

Link connects AOTC, recognised for export potential

Link Connectors, a division of Gordon Technologies, has been contracted by AOTC for the supply of its baluns interface, which is worth over $2 million per annum over the next five years.

After successfully tendering against multinational companies like Siemens, Alcatel and Krone, managing director, Moishe Gordon said "Our unique Australian connector development enabled us to offer a much smaller, more robust, fully shielded and electrically superior balun than was commercially available.

"Our success was due largely to the commitment we have shown over the past 18 months in bringing our quality systems up to internationally recognised standards, as demonstrated by our accreditation by Standards Australia and AOTC to AS3901, encompassing all aspects of design, manufacture and distribution of our products."

The baluns, developed by Link Connectors, interface the 75Ω coaxial carrier station cable and the newly developed 120Ω digital transmission screened multi-pair cable. The 120Ω is to be used by AOTC in transmission networks.

The AOTC specification included 1.6/5.6 DIN 47294 connectors, PCB balun technology and insulation displacement connectors.

Gordon Technologies' success was further recognised with the recent visit by the Federal Minister for Small Business Construction and Customs, David Beddall who congratulated the company on its determination to crack the lucrative exports market.

The minister visited the company to discuss how the government could assist small enterprises entering the export market.

Central to the company's export drive has been the upgrading of its plant and bringing quality systems up to a recognised international quality standard.

Unisys centralises training centre

With its NSW staff and customer training centres now located at North Ryde, the Unisys Pacific Asia Training Centre (PATC) is able offer classes to a combined intake of Unisys' customers and staff.

According PATC, this agreement represents a change in emphasis towards providing customers with more flexibility in education choices. Greater variety is being offered in a mixture of on- and off-site training, along with customised courses.

PATC director, Ian Laidlaw says "We are allowing customers to decide what suits them best. By combining classes, we have increased the frequency of courses conducted at PATC centres which are available to customers.

"At the same time, we have made on-site training more accessible by reducing our costs and providing a more flexible approach to course structure and delivery.

As part of this consolidation, PATC's North Sydney Training Centre has been closed and classroom spaced doubled at North Ryde.

Infonet cuts network bills, prepares for APPN

A globally managed network service for SNA clients has been announced by Infonet which it says can slash network bills by one third.

As well, the service enables clients to handle SNA network traffic in native SDLC mode while concurrently supporting LAN/WAN protocols using a single integrated digital backbone.

"Infonet has made this move for the estimated 70,000 private SNA networks in use today as a strategic preparation for the advanced peer-to-peer networking (APPN) era," said Kevin Ziebell, Infonet Australasian manager.

He said, a significant number of these SNA users also use several WANs, to support LAN traffic in their native protocols, operating in parallel with SNA networks.

A single company could have two or more separate networks, each dedicated to different protocols, ranging from SNA to source route bridging, TCP/IP, IPX and DECNet.

Mr Ziebell added that one site could have two dedicated services, costing an average of $16,400 or a total of $32,800 per month when used on an international 54/64 bits/s leased line between Sydney and Japan.

"With this new service, the same site would need only one circuit and one logical network, supporting multiple protocols.

"Thus, a customer would save $10,850 a month, while having increased availability of Infonet's fully redundant, global mesh network architecture."

Initially the service will handle terminal to host communications while a subsequent phase will support APPN.

Also announced by the company is an Infonet software division to complement and strengthen its network and enhanced services business.

Mr Ziebell said that with the creation of ISD, Infonet has established a single focus for the development, distribution, and management and marketing of messaging based systems.

Proteon.

Nobody has a better track record in Token Ring internetworking.

As networks become linked, it is reassuring to know Proteon is involved in supplying the physical interconnectivity.

Proteon, pioneers in Token Ring technology, provide the adaptors, smart hubs, bridging routers and network management, fundamental in connecting diverse hardware platforms. Network environments based on IBMs SNA, DECs DECNET and the myriad range of PC Lan and UNIX workstations can all be connected by Proteon's advanced internetworking infrastructure.

1st in Harvard Benchmark Test

Proteon's RISC-based CNX 500 Bridging Router has rated top performer in the 1991 and 1992 Harvard Benchmark Test. This independent test measures speed and throughput in multi-LAN, diverse environments among 15 of today's vendors of bridges and routers.

It is not surprising that top Australian companies who are bringing their remote and local networks together on a price/performance basis are turning to Proteon.

Free Internetworking Booklet

If you would like to know more, write for a free copy of "Taking the Mysteries Out of Internetworking – A Manager's Guide", or contact Rob Willis on (02) 412 0050.

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104 on Information Card

Cross platform printing services

Available from Sourceware is Sikta's NetPrint Sun, which is a set network of printing services that provide Sun workstation, Macintosh computer and IBM PC users with a cost effective way of sharing printing resources.

Residing on the Sun Workstation, the NetPrint Sun allows Macintosh and PC users on an Ethernet or a LocalTalk network to access the power and flexibility of Sun printing services. As well, Sun workstation can print to any Mac or PC Postscript printer on the network.

The NetPrint Sun provides users access to the capabilities of NeWSprint printing software and the SPARCprinter from SunPics.

According to SunPics, the NetPrint Sun offers the network with higher speed, higher capacity and more flexible print services. Users can create multiple print spoolers to eliminate printing bottlenecks.

Banner pages, page order, printer names and spoolers can be modified from menus.

Sourceware, Unit 1, 6-8 George Place, Artarmon 2064.

200 on Information Card

Network monitoring and analysis added to NetDirector

Ungermann-Bass and ProTools have announced enhanced network management functions for NetDirector, Ungermann-Bass' network management platform.

The Network Control Series Release 1.2 provides intelligent network monitoring, as well as network analysis capabilities to NetDirector.

The series includes two software applications: Cornerstone Agent which provides a monitoring and analysis capability for each managed sub-network; and Foundation Manager which provides a central console for management of multiple Cornerstone Agents.

These products support SNMP-based management of Ethernet and Token Ring environments. Foundation Manager can be directly invoked from within the NetDirector client.

Network management capabilities are achieved through an auto-base lining process, which automatically determines network nodes and normal network operating characteristics over a time period and then automatically sets alarm thresholds.

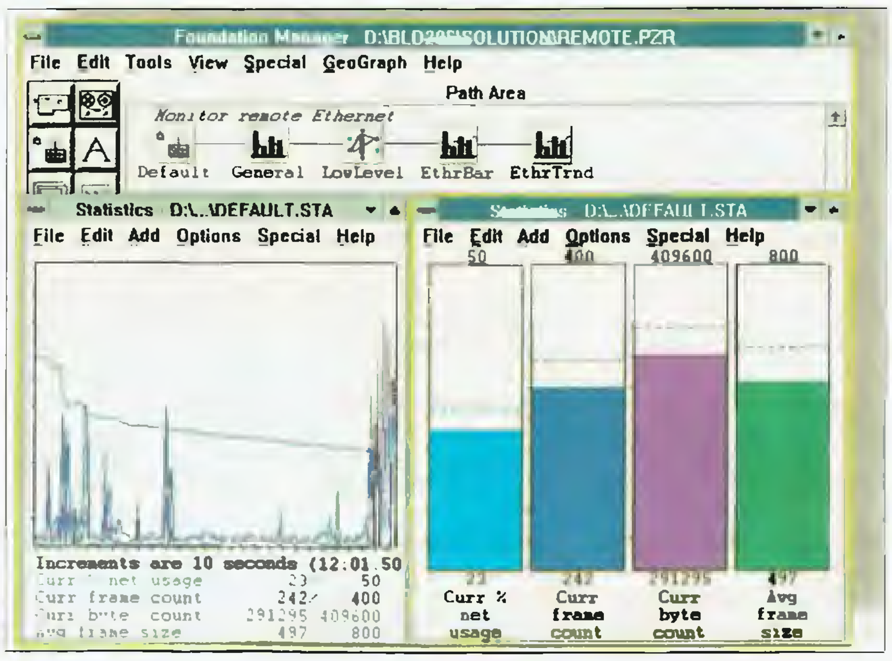
The Network Control Series' distributed approach to monitoring and analysis facilitates proactive management by allowing continuous monitoring of the network from any location.

Its client server architecture allows a Cornerstone Agent to automatically collect traffic information for all the nodes on its subnetwork with subsequent viewing by any Foundation Manager on the network.

The Network Control Series supports RMON MIB standard and runs on standard PC platforms.

Ungermann-Bass, Level 2, 312 St Kilda Road, Melbourne 3004.

201 on Information Card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Curr frame count         242    400
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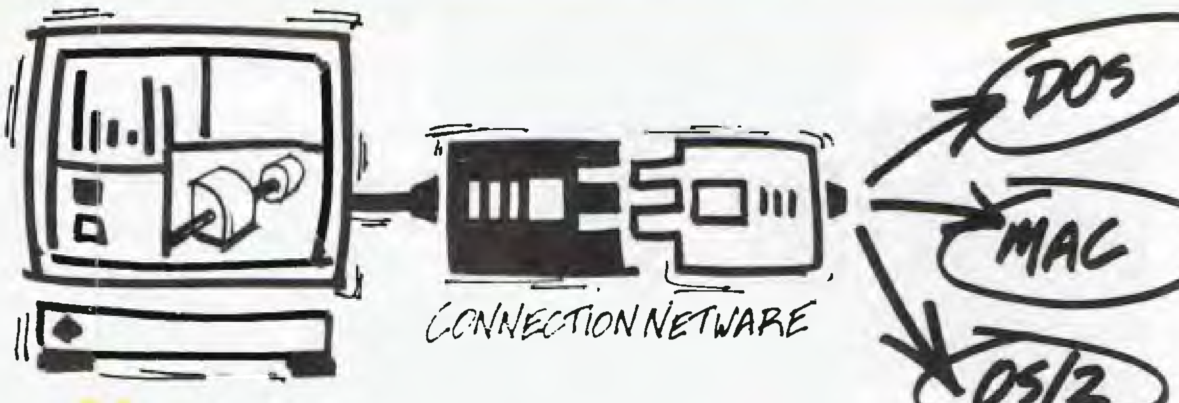

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105 on Information Card

Smaller version Frame Relay tester

The HP PT302 introduced by Hewlett-Packard is a smaller version of its HP PT502 R&D protocol tester for Frame Relay.

In a small, light and low priced design, the PT302 packs the PT502's functionality in a single port WAN configuration with 40Mb hard drive, one 3.5" floppy drive and a monochrome drive.

It offers Frame Relay monitor, statistics, emulation, simulation and load generation at speeds up to T1 or 2.048M bits/s.

The instrument uses the same Frame Relay software as the PT502 with the same user interface. The HP E3947A Frame Relay software is designed to ANSI T1.617 and Annex D, T1.618 and LMI, Q.922 link access procedure for frame mode bearer services, and T1.606 and addendum.

The Frame Relay monitor includes a new statistics package and can fully decode the Frame Relay protocol, header information and user data information.

Suitable for R&D engineers in commissioning and acceptance testing, as well as Tier 2 technical assistance personnel, the PT302 helps identify problems by decoding the information frame and showing the traffic type that comes through. The HP monitor allows decoding of higher level protocols.

Information from Hewlett-Packard Customer Information Centre on 008 033 821.

Management tools

Firmware Design has introduced the TechWorks Net Utilities, which is a collection of basic network management tools to track network devices and alert administrators of network problems.

The five Net Utilities can run in the background on a Macintosh on an AppleTalk network, requiring System 6.0.5 or higher, 512K of memory and MultiFinder.

Devices that appear and disappear on the network are notified with a dialogue or sound by the NodeWatch utility. Administrators can launch an application or record network changes in a log.

The LaserCheck collects and reports information about the laser printers on the network, including fonts, memory, available memory, status and the presence of a start up page. Administrators can enable or disable the start up page for LaserCheck, and rename or reset the selected printer.

Network connections are tested by the NetTimer by sending test AppleTalk echo protocol packets to selected AppleTalk network devices and measuring their response times. Single or continuous tests can be run, while logged or charted results can be printed or saved.

A list of devices within selected zones is prepared by the NameScan utility. It reports the user name, zone, node ID, network ID and socket numbers for each device.

Firmware Design, 28 Coombes Drive, Penrith 2750.

202 on Information Card

Low cost AppleTalk router

Dayna Communications' PathFinder is a single protocol, LocalTalk to Ethernet router available from Conexus.

In the run mode, the PathFinder offers a simple plug and play solution for connecting a LocalTalk network to an Ethernet network when the PathFinder is the only router used.

Once the Ethernet and LocalTalk cables are plugged into the PathFinder, separate LocalTalk and Ethernet zones are created with no user involvement in set up and configuration.

Switching to the automatic mode creates a single logical zone of the Ethernet and LocalTalk segments, allowing all LocalTalk devices to appear under the Chooser in the same zone as the Ethernet devices.

In the automatic mode, the PathFinder requires a seed router on the Ethernet network to supply it with configuration information.

The configuration mode allows users to configure the PathFinder as a seed router on an existing internet of any size and complexity by making specific cable range, zone name, and network number assignments.

The PathFinder comes with a built-in LocalTalk port and three Ethernet connectors (BNC, AUI and RJ45), making it compatible with 10Base-T, thin, thick and fibre optic Ethernet wiring schemes.

It features auto-sensing technology, which automatically configures the router for any Ethernet medium it is connected to. AppleTalk Phase 1 and 2 are supported by the PathFinder.

Conexus, Unit 4-1, Skyline Place, Frenchs Forest 2086.

204 on Information Card

10Base-T hub with SNMP management

Cabletron has added to its MRX Series the MRXI-24, a standalone 10Base-T hub that offers SNMP management capabilities to low connectivity work areas.

The MRXI-24 is the first standalone hub to support Cabletron's recently announced distributed LAN monitoring (DLM) software.

Using this optional software, the hub can be configured to locally poll and monitor any SNMP or IP device on the network, while reducing network management traffic between monitored devices and the network management platform.

Through RMON support, the MRXI-24 can also be configured to apply rising and falling alarm thresholds to data retrieved from monitored devices.

Designed to IEEE 802.3 standards, the MRXI-24 comes with 24 RJ45 10Base-T ports and two user selectable AUI, coaxial, UTP or fibre optic ports for PC and workstation connections into a local area network.

The SNMP management offering means the unit to be managed by any SNMP compliant network management system, including Cabletron's Remote LanVIEW/Windows and Spectrum platforms.

Management features allow network administrators to enable and disable ports, as well as access packet, collision and complete error breakdown counters that provide performance information on each port.

The MRXI-24 can be configured with primary and secondary backbone connections to avoid network downtime.

Cabletron Systems, Unit 8, 112/118 Talavera Road, North Ryde 2113.

205 on Information Card

Extended distance MAU improves ring performance

MM Data Networks has announced the Andrew 9328 multistation access unit that uses phase locked loop technology to extend distance over 16M bits/s UTP.

The extended distance MAU meets IEEE 802.5 specification for transmit and receive of Token Ring signal and can easily conform to the final 802.5 UTP addendum specification.

Kevin Hartin, marketing manager for MM Data Networks says that network users using UTP cabling can now have 16M bits/s flexibility without the distance constraints.

"The 9328 lays the groundwork to faster and more reliable connections for growing networks," he said.

The MAU provides active retiming and regeneration of the Token Ring signal on each lobe port, allowing extended lobe distances of up to 274m on level 4 cabling.

The ring in/out ports include full repeating function, increasing the allowable distances between MAUs.

An auto-loopback feature provides fault tolerance which diverts data over the backup path. Front panel LEDs help locate cable breaks, while decreasing troubleshooting and downtime.

MM Data Networks, Level 7, 423 Pennant Hills Road, Pennant Hills 2120.

206 on Information Card

Fax solution for Macintosh LANs

NetComm has introduced the 4Sight network fax system which provides a Class 2 facsimile solution for Macintosh local area networks.

Paul Heath, NetComm's general manager of sales and marketing, says the 4Sight offers the Macintosh LAN market a convenient, cost effective and secure means of sending and receiving fax transmissions.

"Given that most medium to large companies now have LANs, and 79% of all facsimile documents are generated electronically, it makes sense to offer a network solution," said Mr Heath.

With the 4Sight, a Macintosh user can send a fax while still in the application from which the document is created. As well, the user can recall a pre-written document and fax it over the Mac.

While supporting QuickMail and Microsoft Mail, the 4Sight Fax Mail integration facility allows users to use a common interface for all messaging requirements.

Outgoing faxes can be generated as nodes with or without pre-written enclosures from within the mail application. Receipts are returned to the fax originator in the form of electronic mail messages.

With mail integration, incoming faxes can be intercepted by an operator and mailed back to the appropriate recipient.

Alternatively, incoming faxes can be stored on the server and printed as required, routed back to an identified recipient via network file exchange, or automatically printed by a network printer. As well, incoming faxes can be converted to text for use in word processing.

Options incorporated in the software include a choice of cover page, extra document attachment, time to send, multiple fax servers, single or multiple addresses, and whether to send via a communications server or electronic mail.

NetComm is also offering a two channel fax server licence for multiple fax servers, which is suitable for large organisations with large fax usage.

NetComm Australia, Block A, 25 Paul Street North, North Ryde 2113.

216 on Information Card

Reflection puts VAX graphics on Macintosh

Macintosh users can now have data access to a range of Digital VAX systems with the VT340 emulator released by Megatec.

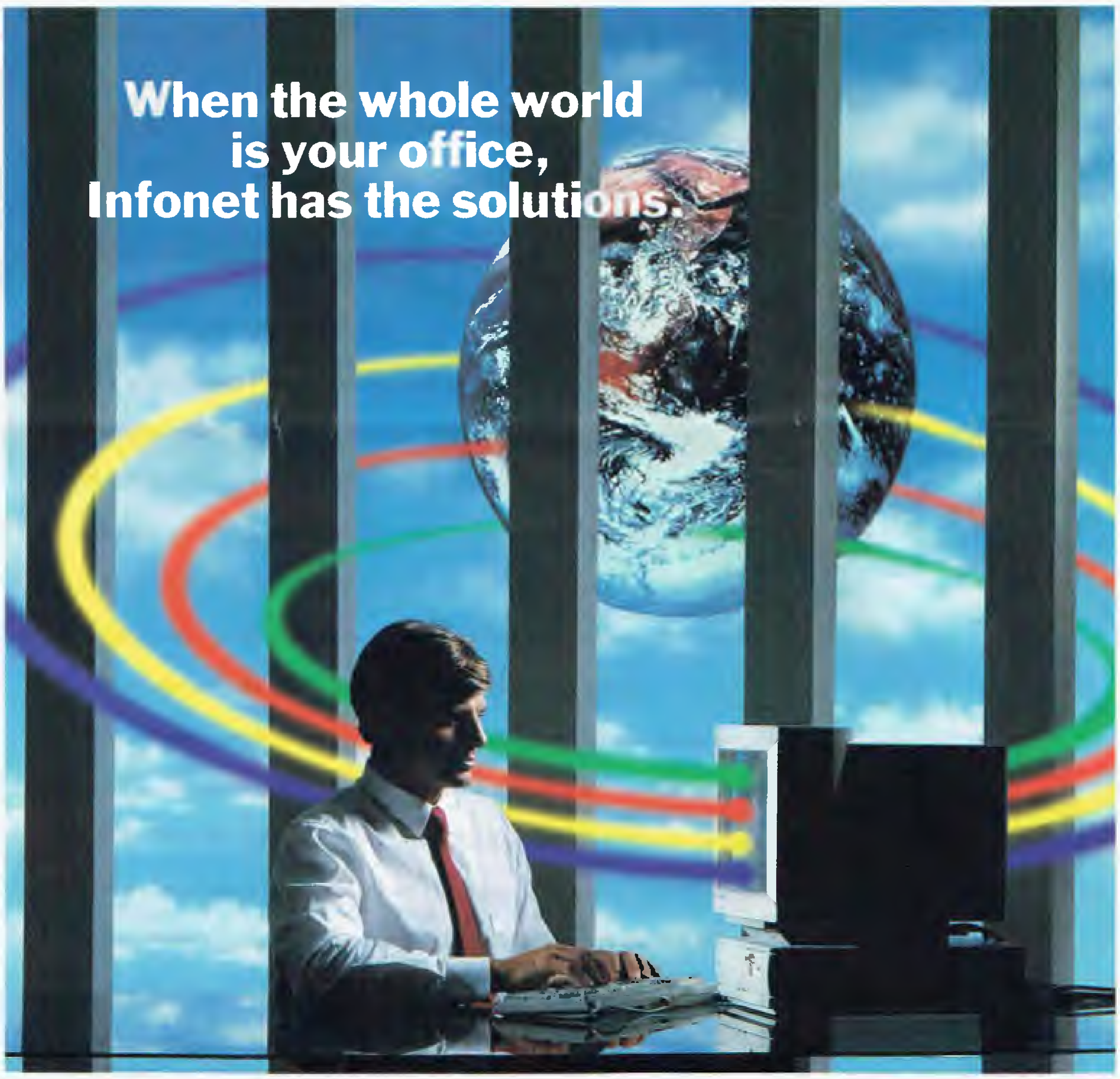
Walker Richer & Quinn's Reflection 4 Plus for the Macintosh emulates 16 colour ReGIS graphics, allowing users to run any VAX ReGIS graphics application from Macintosh desktops and emulate VT340, VT330, VT241 and VT240 graphics terminal. Reflection's terminal window can be sized to view graphics at full VT340 resolution or scaled to fit the size of the monitor. The size setup dialogue box provides total control over the size of the window.

Reflection 4 Plus can be connected to a host through Reflection's built-in serial interface or through Apple's communications toolbox interface for connection tools.

The package comes with connection tools for direct serial and modem connections, ADSP connections and connections via Digital's LAT protocol.

Megatec, 2 Brunswick Road, Mitcham 3132.

203 on Information Card



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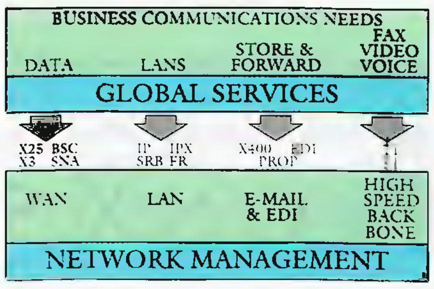

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106 on Information Card

High performance LAN/WAN analysis system

Marconi Instruments has announced Digitech's LAN900 PC-based protocol analyser which is a full function LAN protocol test and analysis tool for Ethernet and Token Ring systems, while supporting most LAN protocols.

The LAN900 can analyse and control LANs or locate a fault from a single workstation.

Consisting of a PC board and software, it captures frames to speed troubleshooting, generates traffic for stress testing, tests cables for fault location and decodes all seven layers of the protocol stacks.

Protocols included are TCP/IP, DECNet with LAT, XNS/MNSET, Novell and AppleTalk, with new protocols constantly added.

The protocol analyser includes alarm thresholds to monitor network operations, historical statistics for trend analysis and is MS-Windows compatible.

With the cable testing facility, the LAN900 can locate shorts, opens, intermittent connections or incorrectly configured transceivers that can bring down the entire network. A TDR test is run on the connected media and an SQE test on the transceiver.

The LAN900 is compatible with both IEEE 802.3 Ethernet and IEEE 802.5 Token Passing Ring. It offers 512Kb of on-board FIFO RAM, maximum capture facility, 8b and 2Kb pre-capture hardware filters and four active post-capture software filters.

The Series 900 Frame Relay analyser and the LAN900 protocol analyser can run simultaneously under Windows on the same PC, allowing simultaneous testing of WAN and LAN segments in spilt screen format.

Marconi Instruments, Unit 1, 38 South Street, Rydalmere 2116.

207 on Information Card

Interlink offers internal FaxModem

Interlink Electronics has announced a PC plug-in card version of its FaxModem Series, which the company says is the first Austel approved internal modem that provides the flexibility of configuration as COM 1, 2, 3 or 4.

The Interlink FaxModem-3i can send and receive both data files and faxes automatically, distinguishing call types for each call and responding appropriately. It supports Group III 9600 bits/s fax operation. Only one telephone line is required to support both data and fax facilities. Text, BMP, TIFF, PCX, Macpaint, IMG, PICT, DCX files formats are handled by the FM3i and faxed directly from the PC.

Other features include unattended fax operation, broadcast facilities, automatic cover page, auto dial/answer/disconnect and archiving facilities.

In data mode, the FM3i supports MNP4, MNP5, V.42 and V.42bis data correction and compression. These protocols can increase the effective data transfer rates up to 9600 bits/s.

Interlink Electronics, 118-122 Queen Street, Woollahra 2025.

208 on Information Card

Wireless LAN adapters

Datamatic has released the RangeLAN LAN adapters that provide desktop, notebook and pen-based PCs with wireless communication using standard LAN software.

A RangeLAN/ISA card added to an existing server creates a hybrid wired or wireless LAN. Users on the wired part of the LAN can share information seamlessly with the wireless users.

Two versions are currently available. The RangeLAN/ISA is an ISA bus card for desktop computers and servers, and the RangeLAN/LT fits inside a Compaq LTE 396s or LTE Lite notebook computer.

The RangeLAN adapters can operate up to 250m between workstations or up to 3km with directional antenna.

As well, the cards feature a built-in security code, allowing only cards with matching codes to communicate. This feature allows the LAN administrator to block unwanted access to the wireless LAN.

Designed as an extension to existing wired LANs, the adapters suit light office automation applications, including peripheral sharing, e-mail, light file transfers and terminal emulation.

Datamatic, 16 Suakin Street, Pymble 2073.

209 on Information Card

W&G analyser handles four interfaces

The DA-31 protocol analyser from Wandel & Goltermann features a modular network analyser platform which supports multiple plug-in interfaces for diagnosing problems on mixed topology networks.

Its backplane can handle up to four LAN interface modules, up to three WAN interface modules or up to three mixed LAN and WAN interfaces.

Users can select any one of the installed interface modules through a software menu without having to physically reconfigure the modules.

The four possible network interfaces installed are connected to a single protocol analyser module while supporting speeds up to 2M bits/s in the WAN environment and 4, 10 and 16M bits/s in the LAN environment.

Interfaces available include Ethernet, Token Ring, X.35 with 2M bits/s Frame Relay, V.24, V.36, X.21 and T1. FDDI interface will soon be available.

The instrument's interface flexibility, combined with its compact size and ruggedness, makes it suitable for field support and field service technicians.

Like the DA-30, the DA-31 is fully programmable for troubleshooting network problems and isolating their origins, monitoring current network activity for planning, and network expansion and analysing overall network performance.

It also decodes and simulates protocols at each layer for greater problem isolation.

Wandel & Goltermann, 42 Clarendon Street, South Melbourne 3205.

210 on Information Card

Enhancements help network problems

Hewlett-Packard has announced its Phase III software enhancement of the HP network advisors that provides expert system support for troubleshooting Novell networking environment.

By isolating network problems quickly, the Phase III software enhancement helps private network managers, who install, maintain and support Ethernet or Token Ring Novell networks, to ensure maximum network availability.

The Phase III adds enhanced statistical measurements with network node discovery, auto-baseline capability, intelligent testing, traffic generation and protocol decodes to the HP network advisors.

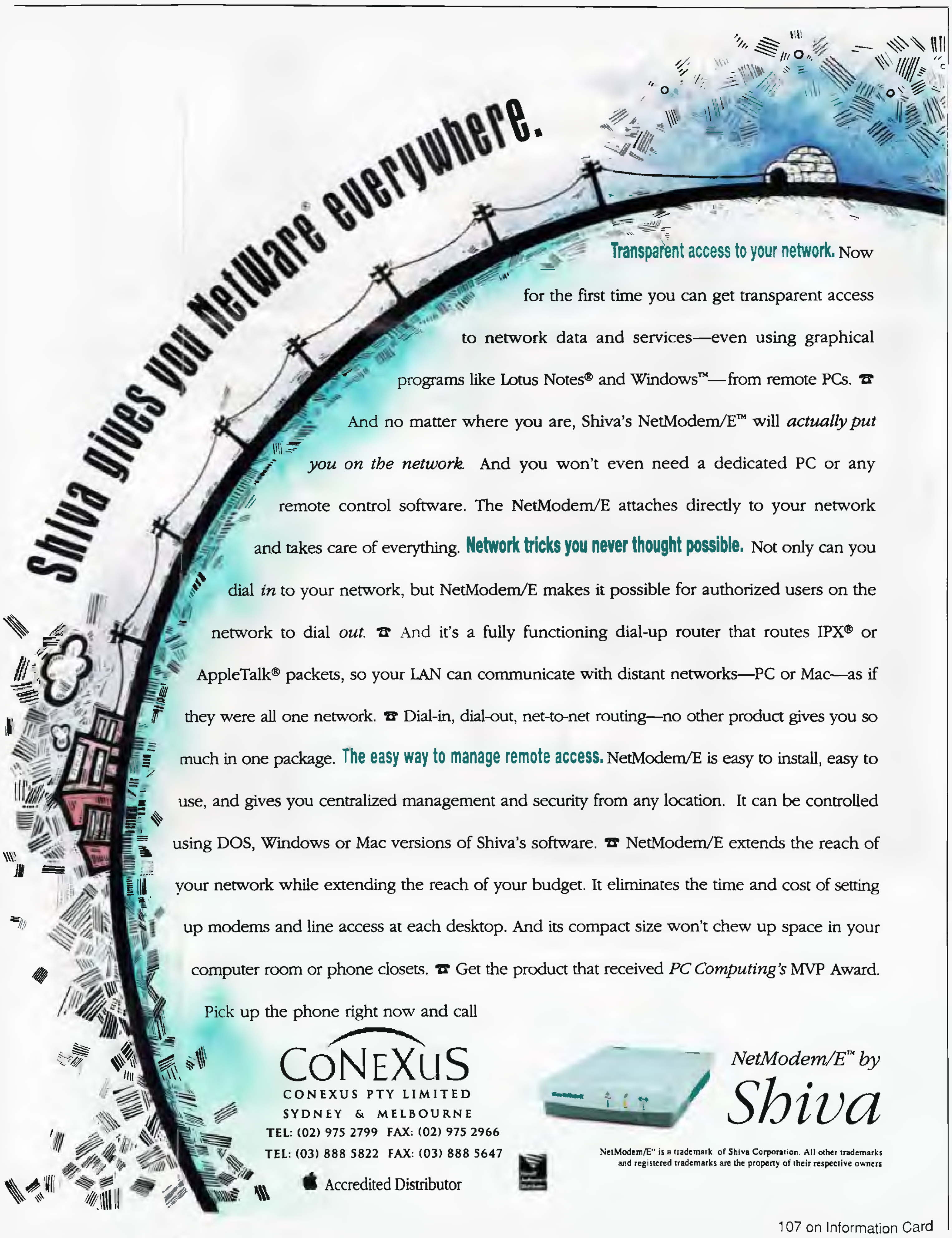
HP network advisors include the HP 4980A combination Ethernet and Token Ring network advisor, the HP 4981 Ethernet network advisor and the HP 4982A Token Ring network advisor. These products currently support Ethernet, Token Ring and wide area networks.

The fault finder, an expert system within the HP network, allows the user to focus on the actual causes of network problems, eliminating the need to capture a large amount of data and then to interpret every frame.

With the fault finder, Novell network managers can quickly and easily identify common network problems, which include fileservers that are down, server overloads, throughput inefficiencies or high hop counts.

Also featured is a network commentator that reports network events in realtime, eliminating the need for the user to search through reams of data for information.

Details from Hewlett-Packard Customer Information Centre on 008 033 821.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107 on Information Card

Mac Token Ring network analyser

AG Group's TokenPeek, a Macintosh-based network analyser for Token Ring, is now available from Conexus.

As a troubleshooting and optimising tool for network managers, TokenPeek makes a connected Macintosh into a passive tap which uses the Token Ring interface card to capture all network traffic for realtime and post-capture analysis.

Network managers can troubleshoot networks by providing baseline network data as graph statistics, which allow packet traffic to be examined to locate problem sources.

TokenPeek can also generate Token Ring traffic, allowing it to be used for network configuration testing and optimisation.

It is similar in objective, design, interface and function at its predecessors, EtherPeek and LocalPeek.

Decoders included with TokenPeek are TCP/IP, SNMP, ARP and RARP, NetWare IPX, Banyan VINES, DECNet, DEC LAT, XNS, IPTalk, AURP and the entire AppleTalk stack.

With multiple interface card support, TokenPeek can be kept running in the background under MultiFinder by using one interface card for normal network transactions with fileservers or printers and a second interface card for TokenPeek.

Problems can be focused with trigger and alarm functions, while with filters and triggers, relevant data can be captured by allowing users to filter on specific addresses, protocols or arbitrary offset.

Conexus, Unit 4-1, Skyline Place, Frenchs Forest 2086.

213 on Information Card

Fibre optic inspection microscope

Kingfisher International has available an inspection microscope kit for optical connector inspection in both single and multimode applications.

The high performance optics offer a magnification of x250 and a range of fibre illumination methods.

For eye safety, the Fibrevue microscope incorporates an infrared optical filter to protect the user against accidental exposure to the laser light.

The kit comes with a a rugged carry case, tripod and various adapters for bare fibres and connectors. A range of objectives, eyepieces and accessories are also available.

The Fibrevue is suitable for installation, factory and restoration applications, where lack of proper inspection causes operational problems.

Kingfisher International, 4/19 Viewtech Place, Rowville 3178.

212 on Information Card

Four port Token Ring card for large internetworks

Based on IBM's 16/4M bits/s Token Ring minicard, Cisco's Multiport Token Ring interface card for its AGS+ router/bridge, according to Cisco, offers twice the performance than previous fastest products.

The product, tested by LANQuest Labs for performance in source route bridging and IP routing over Token Ring, shows a per-port forwarding rate of 25,000pps, compared with the previous industry maximum of 14,500pps.

With four Token Ring ports on a single board, the Multiport Token Ring card allows the AGS+ to internetwork up to 16 Token Ring LANs.

Richard Freemantle of Cisco Systems Australia says that the performance and density are more critical with the increase in high density Token Ring installations.

"Now AGS+ users can segment many Token Ring LANs while minimising the number of new routers.

"High speed connections can be established between groups of Token Rings in a high rise building or across a campus over an FDDI backbone.

"Serial interface modules, such as Cisco's high speed serial interface, can be used to connect such Token Ring clusters to other Token Rings in remote locations," said Mr Freemantle.

The Multiport Token Ring card supports all Cisco IBM internetworking features, including translational and source route transparent bridging between Token Rings and Ethernets, SDLC to Token Ring media conversion, and local termination of Token Ring sessions.

It includes IBM's 16/4M bits/s Token ring minicard with an embedded performance enhanced interface driver and direct memory access components. The card can be configured for two or four ports.

Multiple cards can communicate with each other and with Cisco's FDDI, T3/E3 and Multiport Ethernet interfaces over the AGS+ internal cBus at the 533M bits/s.

Cisco Systems Australia, Level 8, Prudential Centre, 495 Victoria Avenue, Chatswood 2067.

211 on Information Card

Bandwidth on demand for ISDN users

The Multiband, announced by Scitec Communications, is believed to be the first multiplexer capable of aggregating multiple ISDN basic rate accesses for more efficient use of the ISDN basic rate trunk.

According to Scitec's Multiband product manager, Mike Ryder, the aggregation technology is already available for faster but more expensive ISDN primary rate.

"This will be the first time the technology has been applied to multiple ISDN basic rate accesses," Mr Ryder said.

The new range of Scitec's on-demand bandwidth controllers will be configured to provide customised transmission capacity in 64K bits/s increments.

The Multiband BRI-8 controllers can dial up to 16 ISDN B channels for eight basic rate lines for aggregate speeds of 64K bits/s to 1.024M bits/s. The BRI-3 controllers support three BRI lines for maximum dial up capacity of 384K bits/s.

If a channel fails during a call, the system can provide replacement bandwidth and resynchronise in realtime.

Applications for the Multiband are in video conferencing, LAN/WAN connections, imaging, private network backup and overflow, and variable rate communications based on changing data loads.

Many of these data intensive applications require transmission bandwidth between 48K bits/s DDS and 2M bits/s Megalink trunks. As well, most of these applications have variable traffic requirements.

The Multiband technology is designed to address these demands by providing switched capacity at user defined speeds on point to point links.

Both the BRI-3 and BR-8 controllers synchronise and align channels to provide high speed transparent clear channel data links between applications.

Scitec Communication Systems, 3 Apollo Place, Lane Cove 2066.

214 on Information Card

32 bit EISA adapter

Available from Force Technology is Olicom's Token Ring 16/4 adapter for the 32 bit EISA architecture that improves performance of fileservers.

Up to eight of these adapters can be installed in one EISA PC, while only loading up to 50% of the CPU and using the full EISA bus speed.

The EISA 16/4 adapter has on-board support for STP and UTP. It comes with a driver disk consisting of drivers for most network operating systems, including Novel NetWare, Microsoft LAN Manager and IBM LAN Server.

Force Technology, 39 Pacific Parade, Dee Why 2099.

215 on Information Card

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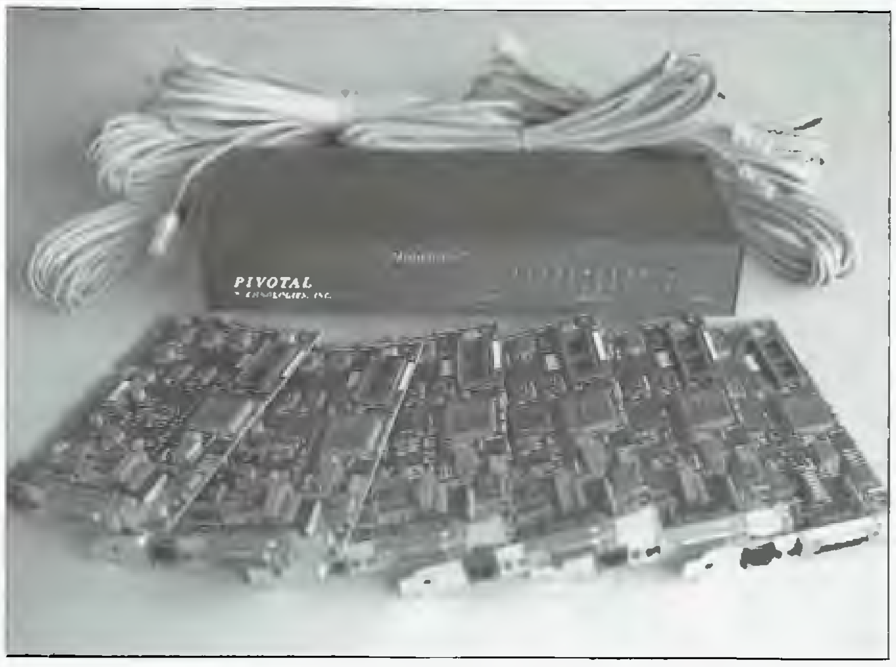
108 on Information Card

Pivotal pre-packaged networks carry all components



US-based Pivotal Technologies has begun shipping a range of bundled network systems under the ReadyLAN label.

Available in Australia from allNET Technologies, the ReadyLAN systems offer five configuration, all supplied complete with the hardware needed to create an IEEE 802.3 compliant 10Base-T network.

Components included in the ReadyLAN bundles include interface cards, hubs and cabling.

The systems use the company's PTI-2100, a high speed 16 bit bus master Ethernet 10Base-T network interface card. This half size card ships with Novell NetWare 2.x and 3.x NE2100/NE-1500T driver (IPX and ODI) for guaranteed NetWare compatibility.

An NDIS driver for DOS and OS/2, certified by Microsoft, is also supplied, along with a packet driver for TCP/IP and IPX.

ReadyLANs are shipped in two, four, six and 12 node configurations.

"ReadyLAN provides small workgroups or companies with the ability to establish high performance, industry standard, IEEE 802.3 compliant 10Base-T Ethernet connectivity at modest price points," said Pivotal's vice president of marketing and sales, Stan Peters.

Another important feature of Pivotal's system is the size of its hub, which is less than 30cm wide.

As well as the ModularHub which forms the basis of the ReadyLAN system, Pivotal offers an internal, server-resident hub card, which can be configured for between two and twelve ports using two port HubSimm modules.

Pivotal Technologies, 8/3 Gibbes Street, Chatswood 2067.
259 on Information Card

Single pair connection for low cost networking

A networking system designed to cut costs by using a single pair of wires in standard voice-grade cables is available from Star.buS International.

According to Star.buS, the MagicNet networking system allows twisted pair networks to be created in existing buildings, with no need for re-cabling to bring the premises wiring up to standard. In most cases, the company says this eliminates the cost of wiring completely, both from new installations and from adding stations to the network.

The company says MagicNet is designed to offer high performance, ease of installation, and straightforward maintenance. As well as operating over spare wire pairs in installed telephone systems, it works with any IEEE 802.3 compatible Ethernet system.

The system is based on the MagicNet hub, which operates as a repeater and is available in four, eight and 16 port configurations.

Up to 30 nodes can be connected to a single MagicNet hub port, using the system's NM100 assistant network manager, a hardware item that connects thin coaxial ports on network interface cards to the single pair wiring system.

When connecting to NICs, the BNC port on the NM100 replaces one 50Ω terminator. Daisy-chained nodes are then connected through the ANM to the MagicNet hub. MagicNet also features realtime, built-in cable diagnostics to simplify the identification and repair of cable and NIC faults.

Star.buS also says that this network system extends the transmission distances of twisted pair wiring over 10Base-T networks. The company certifies its active hubs for a minimum 150m from hub to hub, 120m from hub to NM100, and an extended distance hub is available offering minimum hub to hub distances of 500m.

Star.buS Australia, 15 Coronation Drive, Wentworth Falls 2782.
257 on Information Card

Lattis Views integrates the DEC world into hub-based management

SynOptics Communications has released a management system designed to help DEC VAX users migrate from terminals to intelligent workstations by integrating DEC VAX management with the new systems.

"The integration of VAXes is best achieved by centralising management of all devices, from DEC and other suppliers, through intelligent hubs such as ours," said Steve Wood, general manager of SynOptics Communications Australia.

He said the recently released Lattis Views software solution will allow users to "retain the look and feel of their existing DEC environment, but pull it together at the software level for easy management and control."

Lattis Views allows customers to manage Ethernet and Token Ring networks based on the company's intelligent hubs directly from enterprise network management platforms from DEC, IBM and H-P.

The product provides hub management applications previously only available on SynOptics' SunNet Manager based LattisNet Manager for Unix products, and can be run on IBM AIX NetView/6000, Digital's DECmcc Management Station for Ultrix, and HP's OpenView Network Node Manager.

Mr Wood said this means that "customers who have chosen to use enterprise network management platforms such as DEC also have access to SynOptics hub management." He added that this allows a "plug and play" approach to management, since Lattis Views can be run as an integrated component of other platforms.

Lattis Views offers graphical expanded view, segment view and ring view images of SynOptics intelligent hubs from a network management station, and can be installed and integrated with a variety of management platforms under OSF/Motif.

Once installed on the enterprise network management station, Lattis Views' expanded view and ring view capabilities can be pulled down on the network management station map.

Through pull-down menus, network managers can obtain concentrator, module or port level fault, performance and configuration data.

SynOptics Communications, Units 2 & 3, 79-83 High Street, Kew 3101.
258 on Information Card

H-P WAN analysers for high speed internets

Hewlett-Packard has released the HP 4959A WAN protocol analyser, designed to offer the flexibility needed by network service organisations to solve problems in Frame Relay, X.25, ISDN and SNA environments.

The analyser features an extensible architecture to provide the means to test high speed internetworking technologies, the company said.

Suitable for both installation and maintenance testing applications, the HP 4959A provides a spare full-sized, low profile card slot that allows the analyser to support up to 2M bits/s tests on technologies such as SMDS and Frame Relay.

Compatibility with MS-DOS allows the user to run any DOS test application on the analyser.

A program manager called Toolkit allows the user to run any HP 4959A menu or load any application by pressing a single softkey. DOS programs can be executed from Toolkit, providing the user with a single point fro running applications.

The analyser also includes remote control software, allowing users to troubleshoot network problems from a central location.

The device can be controlled remotely by a PC via a modem link, allowing users to view data and decodes on the controlling PC.

RS 232/V.24, V.35 and RS 499 interfaces are built in.

Based on an Intel 386SX processor, the instrument runs DOS 5.0, can be configured with 1Mb or 8Mb of RAM, and includes either an 86Mb or 172Mb hard disk.

Hewlett-Packard Customer Information Centre, 008 033 821.

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109 on Information Card

Cabletron's Token Ring now heals itself

Cabletron Systems has announced automated beacon recovery capabilities for Token Ring networks based on its MMAC intelligent hub series.

The new feature resides on the company's i960 based Token Ring management module (TRMM) in the MMAC, and automatically isolates and removes faulty nodes from a beaconing Token Ring network, restoring communications in as little as eight seconds.

This feature is designed to eliminate the need for network managers to physically locate and disconnect faulty nodes at the wiring closet.

According to Cabletron, this self-healing capability addresses the need for fault tolerance in the intelligent hub market, improving reliability and availability without network manager intervention.

"The automated beacon recovery process extends Cabletron's strategy to integrate proactive, fault tolerant network management capabilities throughout its entire product line," said Bill Taylor-Mountford, sales and marketing manager at Cabletron Systems.

"This process guarantees network uptime, regardless of faulty hardware or cabling."

Once the fault is isolated and removed from the network, the TRMM issues an alarm alerting the manager to the exact location of the faulty node. The alarm reports information on the beaconing adapter's nearest address, the nearest active upstream neighbour's (NAUN) address, beacon type, port(s) and/or modules bypassed, and the length of time the ring was beaconing. This feature is being offered as a free upgrade to existing Cabletron customers.

Cabletron Systems, Unit 8, 112/118 Talavera Road, North Ryde 2113.
256 on Information Card

Two views of workstation management

by Richard Chirgwin

The combination of powerful applications and SNMP agents installed in hubs gives network managers almost complete control over their networks down to the port level.

However, one of the important shortfalls in management systems to date has been that management systems stop at the port level; the workstation is still more or less invisible to the management system.

Software packages released in Australia recently by Com Tech and 3Com offer two different approaches to this problem, to improve the control offered to the network manager over the connected workstations.

Both packages aim to give the administrator as much control as possible over the end user workstations, without needing to leave the management console.

Their different approaches demonstrate the price, memory usage and performance trade-offs demanded when trying to take workstation management back to the administrator's desk.

By using SNMP-based management, both packages can be integrated into existing management strategies and platforms, and both are designed to extend these management systems by providing information not available using hub-level management.

3Com points out that while most network management concentrates on intermediate systems such as hubs, bridges and routers, users need desktop management as part of their enterprise strategies.

To diagnose problems accurately and quickly, it is important to be able to manage and control network systems down to the desktop, rather than just at the hub level.

As well, Nick Jackson, general manager for 3Com Australia, points out that workstation level management allows management to be implemented where it was previously impossible.

"Don't forget that there are still a lot of coaxial Ethernet networks out there," he said.

"Our Link Watch gives you management over a coax system that just isn't possible using hub-based management."

Microcom's LANlord, represented in Australia by Com Tech, was first seen in this country as a beta version on display at Com Tech's Open Systems Forum earlier this year. 3Com's offering, Link Watch, is a new release software product that works with the company's Ethernet adapter card ranges.

LANlord uses an SNMP agent installed as a TSR in the user workstation to collect information about a workstation's hardware configuration, software configuration, BIOS type, and even the names and version numbers of software packages installed on the network.

For example, the administrator can centralise information gathering about which versions of which packages are being used at which workstations. As well as simplifying the upgrade procedure, this helps improve license tracking in large networks.

The ability to change configuration information in user system files from the central workstation is another important feature of LANlord.

An example is a software failure caused by an error in a CONFIG.SYS file. Using LANlord, the network administrator can alter the file and reboot the user's machine without having to leave the management console.

As well as these remote user management features, LANlord offers software metering to help administrators manage resources and application usage; virus detection and repair, with the ability to detect and eliminate around 1000 common PC viruses; security management; and data export and reporting capabilities.

Workstation information collected by LANlord includes node address, uptime, processor and coprocessor types, BIOS date and signature, DOS version, all types of memory installed, software modules currently running, and other information.

Microcom has also designed the package to help manage Windows users on the network, allowing the administrator to view and edit all WIN.INI files, monitor and track Windows resources such as memory, GDI heap and user heap, and generate alerts if usage of these resources exceeds specific thresholds.

Operating from an OS/2 server, under Windows 3.x at the administrator's workstation, LANlord's SNMP compatibility allows it to function (with some software additions) as an element manager under enterprise network management solutions such as Netview, DECmcc, and OpenView.

Up to 500 PCs running DOS or Windows can be managed from a single LANlord management station, user PCs can be managed at remote sites across bridges and routers, and up to 16 management consoles can operate simultaneously.

Because LANlord can manage a large number of user workstations, it also provides the ability to create user groups based on either physical or logical parameters.

LANlord's database can export information in ASCII format for use in other packages, and it features direct support for Btrieve, Xtrieve, SQL Windows and Q&E.

The network manager can access LANlord from any PC running Windows on the network, and can set alarm thresholds, diagnose problems, distribute new software, create traps and view details of user workstations.

Microcom plans to expand beyond the original OS/2 server-based version to provide LANlord support for Microsoft LAN Manager and Novell NetWare servers.

As well, the company says future products will provide similar functionality for Apple Mac workstations, Unix systems, and devices such as printer servers and gateways.

Minimum requirements for LANlord are a server running OS/2 Version 1.21 or higher, a Windows 3.x management console running DOS 3.31 or higher, and a minimum of 640Kb RAM in PCs connected to the LAN.

3Com's approach is designed to overcome what it sees as memory usage and price penalties associated with TSR-based workstation management.

"The aspect of Link Watch that has received the most favourable reaction in the US is that its memory demands are very small," Mr Jackson said.

Its Link Watch is priced per site rather than per workstation, and the software's SNMP intelligence resides on the server under an NLM called SoftHub, which gathers information by interrogating the adapter drivers supplied with 3Com's network interface cards.

Link Watch's management features are restricted to 3Com EtherLink adapters, but the company has maximised its potential market by ensuring backwards compatibility with all existing EtherLink releases.

This means that the entire 3Com installed base can be managed by SNMP-based management stations.

LinkWatch can monitor network activity and configuration data, monitor and control PC network links, and gather information about individual PCs and users.

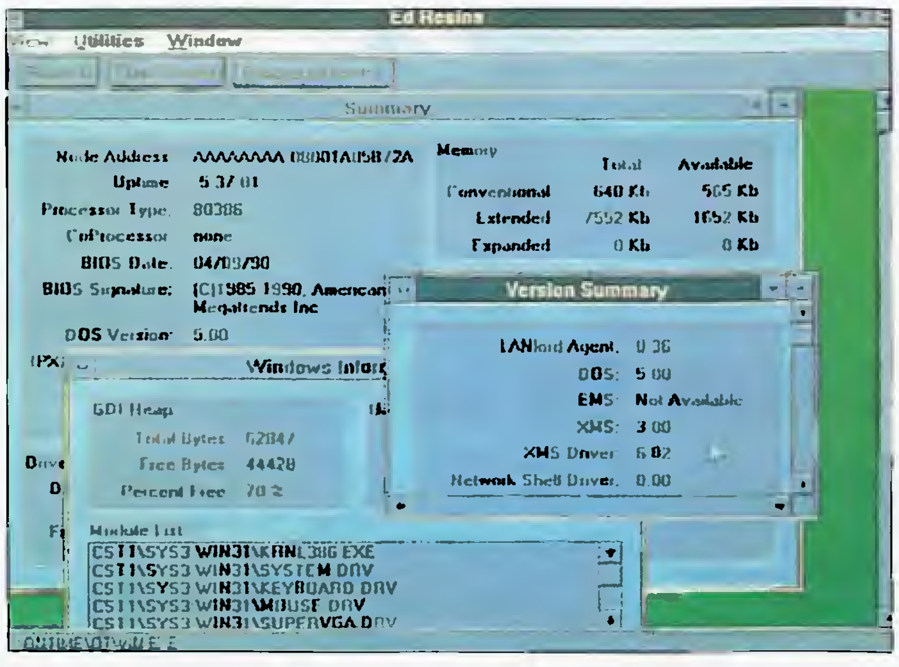
Using LinkWatch, administrators can solve many problems without the need to visit PCs on the network.

The software allows the administrator to identify and isolate errors that affect network performance; obtain data for balancing traffic load; and get information about each network end node, such as the brand of PC, type of operating system, and user information.

LinkWatch is targeted at network administrators with EtherLink adapters using 10Base-T managed hubs, non-manageable hubs, or bus topologies with no hubs.

The software resides at the server, where it acts as a software hub, giving management systems direct access to MIB-based information through the manageable driver on each adapter.

Since the workstation tasks are carried out within the existing interface card software drivers, 3Com has been able to minimise the amount of workstation memory used to implement workstation management.



Node Address: AAAAAAAA 00001A058/2A
Uptime: 5 37 01
Processor Type: 80386
CoProcessor: none
BIOS Date: 04/09/90
BIOS Signature: (C)1985 1990, American Megatrends Inc
DOS Version: 5.00

	Total	Available
Conventional	640 Kb	565 Kb
Extended	7552 Kb	1652 Kb
Expanded	0 Kb	0 Kb

LANlord Agent: 0 36
DOS: 5 00
EMS: Not Available
XMS: 3 00
XMS Driver: 6 02
Network Shell Driver: 0.00

Total Bytes: 62847
Free Bytes: 44428
Percent Free: 70 %

```
CS11\SYS3 WIN31\KRNL386 EXE
CS11\SYS3 WIN31\SYSTEM DRV
CS11\SYS3 WIN31\KEYBOARD DRV
CS11\SYS3 WIN31\MOUSE DRV
CS11\SYS3 WIN31\SUPERVGA DRV
```

For NetWare nodes, Link Watch uses at the most 3Kb of the workstation's memory; for NDIS nodes, it uses less than 6Kb. This compares with the 19Kb demanded by LANlord.

While memory is often not an issue for the more powerful workstations now popular with users (especially since LANlord's TSR can be loaded into high memory), older 640Kb machines can find themselves running short of memory for applications when running a large number of TSRs.

LinkWatch includes manageable NetWare and NDIS drivers for use with 3Com's EtherLink II, EtherLink II/16, EtherLink 16, EtherLink/MC and EtherLink/MC 32 families of Ethernet adapters.

The greatest differentiator between these two products, however, is in pricing.

Microcom's strategy seems to be to provide as many features as possible, with pricing comparable to per-node management at the hub level.

The result is a broad range of features, with prices ranging from $1830 for a ten user license ($183 per managed user) up to $16450 for a 250 user license (under $66 per user).

3Com has adopted an agressive price strategy for its Link Watch, with licensing charged on a per-installation basis at $640 for a license covering up to 251 nodes.

This is in line with other pricing decisions, such as that covering its NSA (network security architecture), which sees 3Com aiming to maintain the prices of its core hardware products, while keeping the per-port cost of added value items to a minimum.

Com Tech, Unit 6, 37-41 Doody Street, Alexandria 2015.

3Com, Level 6, 90 Mount Street, North Sydney 2060.

253 on Information Card

Gandalf NMS enhanced with auto discovery

New SNMP/OSI management software from Gandalf-Infotron International is designed to add significant functionality to its Unix-based Access Manager multivendor LAN network management system.

The package now includes a discovery option, which automatically locates connected devices, and displays their status and protocol type on a topological map.

Access Release 1.2 software includes vendor-specific SNMP MIB extensions for devices from Cabletron, cisco, Proteon and SynOptics, as well as Gandalf's Access Series LAN concentrator and internetworking products.

In addition, the enterprise edition of the software offers a standard MIB integration tool, allowing users to incorporate specific SNMP MIBs from vendors such as Wellfleet, Chipcom, 3Com and Ungermann-Bass.

David Barker, national sales manager of the company's Australian distributor Infotron Systems, said these MIB capabilities "provide users with unprecented flexibility in configuring their networks."

Access Manager Enterprise Edition is designed to manage large, geographically distributed multisegment networks, while the Domain Edition is a cost-competitive version aimed at networks with fewer than 250 managed devices.

The optional network discovery feature in the enterprise version locates networked devices and displays their status on a topological map, providing straightforward configuration management, preventative maintenance and problem management.

An MDC (management domain controller) in the new package allows multiple Access Manager systems to be networked. Mr Barker says this capability is particularly valuable in large distributed networks, where bandwidth efficiency and security are important.

The MDC also provides user-specified transfer of management control, allowing network management capability to be transferred automatically to another physical location, for example at a specified time of day.

Release 1.2 includes links to the Informix SQL database management system, allowing network administrators to process collected data to their own needs.

Infotron Systems, Unit 17, 390-392 Eastern Valley Way, East Roseville 2069.

254 on Information Card

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111 on Information Card

Siemens' analyser measures ISDN S0 interface

Siemens ISDN S0 analyser, the K1403, performs measurements and analysis on the user network S0 interface.

The K1403 is portable. however it does require a mains power supply. It has a V.24 interface as a printer output and an electroluminescent display.

It offers facilities for checking the logical functions of an ISDN connection, in addition to checking those of the physical layer. It is capable of simulating both a terminal equipment (TE) and a network termination (NT) so that it can be used to check the functionality of TE and NT units.

Because the K1403 can simulate functions of ISDN components, it can be used in combination with smaller devices for measuring the bit error rate and other parameters. In addition, it consists of modules which can be purchased, so that it can be adapted to specific requirements.

The K1403 offers high speed measuring ability and operating convenience with its touch screen.

Three options extend the K1403 covering all required measuring modes and providing many more functions. The "jitter" option can be used to investigate the weighted jitter amplitude and the jitter spectrum (FFT analysis). It also incorporates a jitter generator to facilitate sensitivity measurements.

The "functional tests" option allows error rate measurements to be carried out. This option also covers all functional and procedural tests and in addition, permits transparent access to all data bits in the S0 frame.

An S0 bus line simulator option helps test ISDN equipment such as telephones, fax machines and networking terminating equipment without the need for drums of cable.

All the results of a measuring mode are displayed cyclically after starting. In the result mode, a conformance statement is added to the result after stopping. In the case of graphic results this is done for every cursor position. A convenient feature is that the cursor can be positioned merely by touching the section of the curve of interest.

All graphic displays conform with those of the CCITT I.430 recommendation which makes "at a glance" assessment much easier. The hard copy feature allows the results to be logged together as they occur.

There are approximately 320 single measuring tasks on TE and NT which are supported in the K1403 by basic measuring functions.

For example the measurement pulse shape, pulse balance and the impedance of the active transmitter are realised by 'multi periodic sampling' with resolutions of 12 bits and 24MHz or 48MHz. The pulse balance is measured on the pulse area of the E/I bit, for example in the INFO3 frame. The method works reliably even when the first INFO3 frame is preceded by single undefined bits varying strongly in width due to transients.

The signal shape is also used to determine the output peak current, so that non linear events can be measured at the protective circuits of the item under test.

The source impedance is compensated by an approximation method and the noise by exponential time averaging. The measuring accuracy is approximately three percent.

Different S0 bus configurations are required between test item and analyser for measuring the frame delay. The artificial line referred to above is looped into test set up depending on the selection.

The delay of the line is acquired in a calibration step prior to the measurement and is deducted automatically. This cuts out subsequent, time consuming corrections to the test results.

Siemens Ltd., 885 Mountain Highway, Bayswater, 3153.
260 on Information Card

Broadband now available to 70,000 German homes

In August, Philips handed over Germany's largest and most modern broadband communications system in the state of Brandenburg.

Under a contract from Deutsche Bundespots Telekom for this turnkey project, around 70,000 homes can now be connected to the system.

The network is already operating in Potsdam and Beelitz, and seven further local networks will be completed by the end of the year.

This system is a follow-up to a turnkey project in 1991, under which 26,000 telephone lines were provided in Potsdam and Zossen. The project in the Potsdam telephone exchange area consists of four radio receiving stations, 500 network repeaters and 14 repeater stations.

More than 1100km of cables and around 200km of optical fibre were laid for the project. Also included were multichannel analogue optical systems, high quality modulators, and satellite dishes.

Philips says the broadband system will give consumers access to satellite TV along with 26 television channels, 15 stereo VHF radio channels, and 18 digital radio channels.

H-P provides B-ISDN tests

Hewlett-Packard has introduced the HP 75000 Series 90, a 155M bits/s ATM analyser.

The analyser contains ATM and SONET/SDH measurement capability for testing broadband ISDN networks.

The Series 90 analyser provides comprehensive ATM cell generation and analysis within a SONET/SDH frame structure. Multiple ATM-virtual channels can be generated in a variety of different cell distributions to simulate a B-ISDN network.

Users can measure ATM performance parameters such as error rate, cell loss, cell delay and cell delay variation to verify ATM switch performance and congestion control.

HP's ATM analyser complies with the latest CCITT recommendations and can be updated easily through software and hardware ATM upgrades. The new analyser employs the industry standard VXI platform and modules and is compatible with HP's existing range of modules for the HP 75000 Series 90 SONET/SDH analyser.

Both analysers offer a Microsoft Windows-based personal computer user interface that simplifies operation.

The ATM analyser is designed to meet the needs of telecom manufacturers in research and development; conformance and production; as well as telecom service providers during field trial and installation of B-ISDN equipment.

Contact Hewlett Packard Customer Information Centre on 008 033 821.

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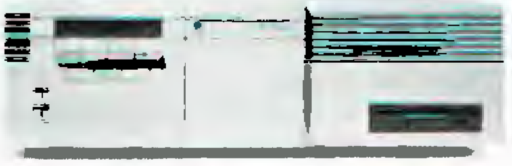

NETBuilder II

All this is found in the new NETBuilder® II. It is quite simply the most potent combination of technology in networking today. NETBuilder II harnesses RISC, FDDI and an 800Mbps backplane to an ASICs design that reduces the number of parts while increasing the number of product functions. Power goes up. Speed goes up. Maintenance goes down. All while running such state-of-the-art protocols as OSPF and IS-IS.

Nokia starts on GSM for Optus

Nokia Telecommunications, selected to build the nationwide GSM network for Optus Communications, has signed a contract with Sydney company LSE Technology for LSE to install the first phase of the GSM network here in Australia.

The new network will be in competition with another GSM network operated by Telecom, as well as a third carrier yet to be appointed by the Government.

Nokia and LSE are already cooperating in Indonesia, and the two companies say this facilitates good opportunities to further strengthen the cooperation in the Asian region and elsewhere.

In Indonesia, LSE is currently installing a Nokia-based digital microwave system for the Indonesian railway, Perumka.

For the Optus GSM system, LSE will install the radio base station equipment, to be manufactured under licence from Nokia by Perth electronics group, ERG Telecommunications.

Nokia will train LSE technical staff in the techniques of installing and testing the radio base stations under Nokia project management and supervision.

According to Roy Baxter, director of LSE Technology, this transfer of technology from Nokia has benefits for LSE by enabling them to develop other products based on the same technology.

The initial contract will commence soon and the GSM service is due for introduction in 1993.

According to Optus' David Foster, "Optus expects that in five years 80% of the population of Australia will have access to a base station.

"Initially, for this nationwide project, Optus anticipates in excess of 35 radio base stations in Sydney and the same number in Melbourne to be erected."

The GSM network structure is a system which requires a computer at each base station, managed by a central computer system at each major city. The base stations, Nokia's DX 200 MTXs, are fully digital, autonomous, stored program controlled mobile telephone exchanges.

Each DX 200 MTX contains a dedicated 32-bit processor. The audio signal is digitally encoded and sent as a bit stream which can include other digital information.

The advantages of this digital network over an analogue network are:

☐ more channels available in the RF spectrum;

☐ improved voice quality and immunity to interference signals;

☐ support of data and fax transmission, with data transmission speeds up to 9600 bits/s; and

☐ the digitised voice protects against eavesdropping and can be encrypted for further protection.

The GSM system also includes compatibility with ISDN; complete mobility management, including roaming (conforming to R2 and CCITT7) and handovers within one MTX (mobile telephone exchange) and between MTXs: efficient frequency spectrum utilisation through small cell, micro cell and umbrella cell techniques, with interleaved techniques to further increases the efficiency of the use of the frequency spectrum and mobile station dynamic power control enables to minimal interference in the network.

In addition to the mobile handsets, a variety of user equipment such as data terminals and printers, scramblers, answering devices, telefax terminals, and coinbox mobile telephones are available for users.

TelcoNews

Telecom buys Siemens ISDN, trials SDH

Siemens has been chosen by AOTC to develop and supply its second generation 2M bits/s PRA ISDN line transmission equipment. Delivery is scheduled to commence July next year and will continue over the next four years.

The company is currently designing the PRA ISDN line transmission equipment in Melbourne to meet AOTC's requirements.

Siemen's manager for the project, Dieter Hillmann, explained the equipment will provide the connection between ISDN customer equipment (such as PABXs) located at a customer premises, and the nearest AOTC exchange building. From there, the 2M bits/s signal will be transmitted via the national network to a centralised ISDN exchange.

The transmission medium between the customer premise and the nearest AOTC exchange building can be either copper pairs (telephone wires of the local network) or optical fibre.

The system can also be configured to carry any 2M bits/s signal according to G.703.

The company is now designing an ASIC which will be at the heart of the PRA ISDN line transmission system. The device will provide all the necessary information for a network management system.

In a separate contract, the company is installing SDH cross connect equipment at the AOTC Transmission Equipment Laboratory in Melbourne for the first Australian trial of this type of equipment.

The first type of equipment being installed is the CC155 switching facility. It provides flexible switching options for 140M bits/s plesiochronous signals and 155M bits/s STM-1 SDH signals.

The second type of equipment included in the trial will be the CCM2 switching facility. This synchronous cross-connect multiplex equipment provides electrical interfaces at 2M bits/s, 34M bits/s in the plesiochronous hierarchy and 155M bits/s in the SDH.

The CCM2 can establish flexible connections and multiplexing between these port types.

The external interfaces (ports) of the CC155 are electrical 140M bits/s or 155M bits/s. The switching matrix can establish links between any combination of these two port types and can thus provide an interface between the PDH and SDH.

Development of optical line interfaces for the CC155 is in progress.

Options for the CC155 include cross-connect functions to meet changing line demand as well as protection switching in the event of fault conditions.

Depending on the application, CCM2 can be used either as a separate switching facility or together with other switching facilities.

Northern Telecom wins China datacomm contract

Northern Telecom's Hong Kong office has been selected by China's Ministry of Posts and Telecommunications (MPT) to supply DPN-100 packet switching equipment and software for China's first nationwide data communications network.

The company's first DPN-100 contract with China was back in 1988, a US$3.5 million DPN-based system which was installed in Guangdong PTA (Posts & Telecommunications Administration).

Under the terms of the latest US$9 million deal, Northern Telecom's DPN-100 switches will form the backbone of the planned ChinaPac network.

The network will consist of 32 nodes and cover 28 provinces and autonomous regions, and three municipalities. ChinaPac will support both public and private networks.

The plan is to begin installation in the second quarter of 1993 and the network is expected to be in operation by the end of 1993.

The project marks an important step in China's plans to modernise it's existing communications network. According to Michael Lambert, Northern Telecom's managing director for the Peoples' Republic of China and Hong Kong, "The DPN-100 network will be central to the communications needs of a wide range of businesses and industries, including banks, airlines, post and delivery services organisations, transportation companies customs offices and energy bureaus."

At the heart of the network is Northern Telecom's top-of-the-line DPN-100 switching technology which supports most protocols.

Mr Lambert said, "With a national data comm infrastructure in place, the potential for communications growth is tremendous."

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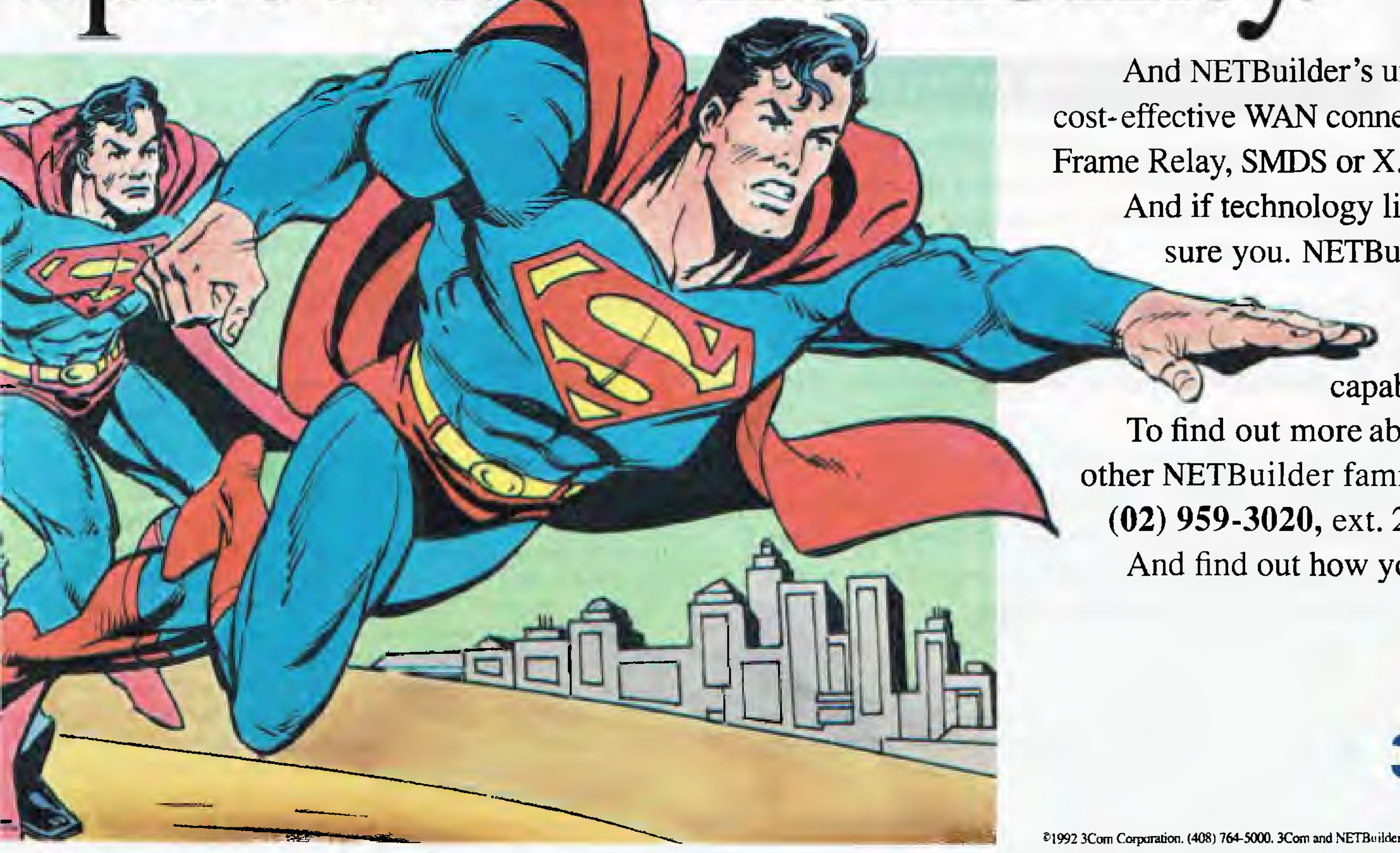

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112 on Information Card

Open systems for Melbourne lawyers

A recent move to larger offices in Melbourne's new Stock Exchange Building has given law firm Arthur Robinson & Hedderwicks (AR&H) the chance to plan its network installation while the stock exchange was being fitted out.

The firm has used SynOptics' LattisNet System 3000 intelligent hubs to form the basis of a flexible, easy to use, standards-based network.

Within the next six months, AR&H plans to install a CD-ROM database. The SynOptics hubs will provide users with direct access to this database.

As one of the top three law firms in Melbourne, AR&H needs to have fast and reliable access to its information systems. The firm says its purchasing decisions were driven not by cost, but by the need for failsafe systems.

The company's expanding resources comprise fifty practicing partners and more than 400 staff, spread over eight floors, and plans are in place to expand to another six floors in the future.

AR&H recognised that to provide complete access to its current applications, and to the planned CD-ROM database, it would need to completely revise and upgrade its network design.

The new system's overall goal is to give anybody connected to the network transparent access to information on all connected systems.

In its former premises, AR&H had used proprietary computing facilities supporting an accounts package, and word processing for preparing agreements, financing documents, litigation and other legal documents.

This network also supported the company's existing library and litigation databases, which are referenced by lawyers and secretaries to provide accurate status of case proceedings at any given time.

According to Eric Aspinall, Arthur Robinson & Hedderwicks' systems planning manager, the firm was determined that any new investment in networking technology would give the firm a growth path for the future.

"We wanted to be able to integrate current platforms such as Ethernet and our proprietary databases; support standards such as OSI and TCP/IP; and to benefit from new technology as it evolves.

"In essence, this has meant a move away from proprietary environments and the adoption of open systems computing in its broadest sense.

"The cost benefit of this approach is that while initial costs have been significant, the long term cost of maintaining the network and our computing environment will be minimal," he said.

"Structured cabling and standards-based networking infrastructure has meant that we have the flexibility and functionality required for future growth."

Following an extensive tendering process and successful test implementation at the old premises, Infotron Systems was selected to implement the new network, featuring fully redundant network design and Infotron's custom terminal server management software.

According to Infotron's Adam Dunstan, AR&H was "fortunate to have the opportunity to completely replace its computing environment."

"This allowed us to build a system that is easy to use, and which also provides the accountability that the legal business increasingly demands.

"Like other organisations in their position, AR&H took the opportunity to install standards-based systems, providing vendor independence and greater interoperability," Mr Dunstan said.

Eric Aspinall (right), systems planning manager for AR&H, with Steve Wood, general manager of SynOptics Communications Australia/New Zealand, in AR&H's library.

Structured wiring has provided a cost-effective, once only flexible cabling plant.

A saturation installation of UTP cables and RJ45 connectors supports a variety of terminals, PCs, printers and other peripherals, connected to terminal servers and DRS6000 Risc/Sparc CPUs provided by Alcatel Australia, via the LattisNet System 3000 hubs and a fibre backbone.

System 3000 intelligent hubs on each floor provide Ethernet, fibre optic and 10Base-T host connectivity, with high speed bridging implemented in the hubs.

SynOptics' LattisNet Network Management system provides network management for both Unix and SNMP devices.

Asynchronous connectivity is provided by the terminal servers, with a dual fibre backbone connecting the servers to five DRS 6000 hosts located in the centralised computing room.

These hosts run the Office Power word processing package, BHL accounting system, and BRS, an additional library and litigation database.

The hosts, along with two proprietary Remington Unix boxes retained to support the existing library and litigation databases, are linked by an Ethernet LAN running TCP/IP, RFS, NFS, FTP and Telnet.

The Remington CPUs are also connected, via UTP cable, to a single SynOptics 3030 intelligent hub in the computer room, giving them connectivity to users throughout the network over the fibre backbone.

"The SynOptics System 3000 intelligent hubs have been instrumental in facilitating communication between each LAN and the host computers, using Ethernet and TCP/IP access methods over the same cabling," Mr Aspinall said.

"They have also provided us with a flexible and scalabe network growth path for the future.

"The network allows easy transfer of users from one server to another to enable performance balancing," he said.

Host ports located on the front of each LattisNet System 3000 chassis provide easy access to add or relocate end users, and as the network grows, AR&H can easily integrate additional intelligent hub and host modules.

Each terminal server can control ten devices, with up to 12 terminal servers connected to a single controller card in each of the hubs, allowing the company to attach up to 120 devices on each floor.

According to Mr Aspinall, a major requirement of the new network was the ability to easily reconfigure users and add new users.

"Many network management systems were able to report on the status of each network component through sophisticated GUIs, but SynOptics' was the only system that could demonstrate a simple move from one port to another without going into complex code," he said.

LattisNet management provides complete physical and MAC-layer control down to the individual ports on each module. All of the SynOptics internetworking modules feature SNMP agents to provide access for the management station in the central computer room.

"We have been impressed by the intuitive graphical user interface provided by LattisNet, which gives either global or individual port level views of the network in real time," Mr Aspinall said.

"The system is providing the level of control we require to monitor and reconfigure individual connections on either the PC or Ethernet network, but to date we have not needed to use the troubleshooting or disabling functions in cases of system bottlenecks or network failure.

"This is due in no small part to the level of redundancy built into the network design by Infotron. Coupled with a menu-driven user interface developed by Infotron for the terminal servers, we have been able to build a fault tolerant system," he said.

Mr Aspinall said that if one of the DRS6000 hosts fails, the terminal server recognises that it has lost its link to the CPU and alerts the management system. As soon as the time threshold for lack of connection has been reached, users on the faulty CPU are switched to a different CPU.

Argyle Diamond sparkles

While focusing on computer technology in its latest development phase, leading diamond mining company, Argyle Diamond Mines, has tackled its network connectivity problems with Reflection terminal emulation products from Megatec.

Besides using advanced computer controlled polishing equipment and laser devices, Argyle relies on three networks which control a wide range of operational and administrative tasks.

"With Reflection for DOS and Windows, we were able to gain terminal emulation and PC operation in one machine, and the entire process is transparent to the user," said Cathy Pye, a computer consultant for Argyle and responsible for supporting its Perth network.

"The problem was that we were limited by the number of serial connections we could have, and each time a PC user wanted to access one of the hosts, they had to physically attach the serial connections."

Argyle Diamonds' Perth head office runs a network of 250 DOS-based PCs and two HP 3000s that maintain in-house accounting and stock tracking applications.

The LAN is connected to a suburban office of 30 Windows-based PCs and an HP 3000 which handles administrative functions. Its third network of three HP 3000s and 200 Windows-based PCs maintains operations at the mine.

"The three networks are autonomous but require constant communication with each other to update information on various aspects of the company," said Ms Pye.

She said the Reflection products allow the PCs and HPs to exchange information in this environment and continue to play an instrumental role in Argyle's computer evolution.

"The mining industry is constantly evolving in the techniques and technology it implements. We rely heavily on computer technology for everything from gauging deposits to marketing our products.

"If we need to remain internationally competitive, we will need to access to all our corporate resources wherever they reside. Tools, like Reflection are helping us meet this need," Ms Pye said.

The Reflection terminal emulation and connectivity products are developed by Walker Richer & Quinn of the US and distributed in Australia by Megatec.

Reflection transparently links all systems, providing VT and HP text and graphic terminal emulation. It offers network users the ability to run application simultaneously and fast switching between these applications.

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Datacraft communications unit speeds fire alarms

A computerised alarm interface unit (AIU) developed and manufactured by Melbourne-based communications firm Datacraft is helping improve response and despatch times for Melbourne's Metropolitan Fire Brigade (MFB).

Already attracting attention from interstate and international fire and protection service providers, the Datacraft AIU is a small communications unit connected the a building's various sprinkler and fire protection alarms.

It provides the necessary signalling and communication between activated sprinkler or fire detection systems and a computer system at the local fire station, using a dedicated phone line.

Systems at the various local fire stations are then connected on-line to a large database at the MFB's East Melbourne communication centre. Alarms received at the fire station from the Datacraft AIU are passed to this communication centre.

The communication centre's database then collates information about the site of the fire, such as dangerous goods stored there, the site's fire equipment and facilities, and other details about the premises and the people working at the location.

"This information enables us to quickly assess the situation against all the detailed database information displayed on a screen, and despatch the appropriate resources and equipment from the nearest fire station," said MFB fire alarm services manager Peter Parsons.

"All this is achieved within a matter of seconds upon receiving communication from the alarm interface unit at the client's premises."

Mr Parsons said the development of the AIU has resulted in significant cost savings in time and resources, while quick response also helps minimise the cost of a fire.

The project began around three years ago, when the MFB called for tenders to develop and supply a second generation AIU which could connect with the various detection devices, and automatically provide the appropriate communications signalling to the city-based operations centre.

Part of the MFB's computerisation and modernisation plan, the alarm interface unit was to be an integral component within the monitoring and detection services upgrade program then being undertaken by the brigade, which was using an older AIU with limited features.

"We received several tender submissions, but were impressed with Datacraft," Mr Parsons said.

At the formal handover of the alarm interface unit are (from left) Peter Parsons, MFB fire alarm services manager and Jeff Godfredson, MFB chief fire officer, Bill Howden, Datacraft account manager and Gerald Glover, general manager for Datacraft Manufacturing.

"Not only were they able to develop and manufacture the alarm interface unit to our requirements, but they included a number of unique solutions to meet our needs.

"They applied their communications expertise, basing the AIU around modem technology, but what really impressed the MFB was the creative industrial design employed for the active and durable casing, which provides ready access to switches and clear status displays."

The brigade has already installed around 6500 units at metropolitan premises.

Bill Howden, senior account manager for Datacraft, said the development of the AIU had taken more than nine months, and involved a lot of valuable input from MFB personnel.

"The AIU is basically the result of applying modern communications technology to a very different application", he said.

The end product contained more than was required in the original tender, since additional features were added after the application plan was outlined and technical and manufacturing personnel from Datacraft and the MFB began working together on the project.

Scitec supplies Qantas WAN/LAN products

Qantas' new international headquarters, the Sydney Airport Centre, is installing LAN products, including intelligent Ethernet and Token Ring hubs and routers, supplied by Scitec Communication Systems.

Qantas is relocating its international centre at George Street, Sydney and other buildings in Sydney's CBD to two new buildings in Mascot, Sydney, with one housing the head management and administration and the other housing Qantek, Qantas' information technology centre.

Qantek currently operates a 54 node network of Scitec MAXIMA bandwidth systems. The network forms the backbone to its Australian and international communications involving reservations, maintenance, catering and training.

Selected after an evaluation process during which "what became clear was Scitec's record in the WAN area as a reliable organisation, demonstrating its ability to maintain our large sophisticated network and support both in Australia and internationally," said Dennis Cutrupi, Qantek's communications manager.

"Its LAN products have proved to be an international standard as well as the company's reliability is an important long term factor for this LAN contract."

Cabling for the LAN is a structured wiring scheme using AT&T PDS level 5 wiring designed for current and future needs and will be able to accommodate 4200 wiring outlets, supporting both voice and data applications.

The Sydney Airport Centre's two nine floor buildings will be linked via a fibre optic backbone. The LAN will be integrated into the Qantas wide area network via a Scitec MAXIMA node.

A disaster recovery site is located at Homebush Bay, while the main computer facilities for Qantas will remain at the international centre. Microwave dishes, also located at the international centre, will provide some line of site communications.

The LAN will be used by Qantas staff for administrative functions and by Qantek to manage its information technology business.

Entcom to keep ANZ network on-line

Entcom has been awarded the ANZ contract to supply cabling installation and maintenance services for voice and data networks throughout Victoria.

Managing director of Entcom, Wes Ferguson said the contract was significant because it was the first tender of its kind let by ANZ.

Previously, the bank's businesses were responsible for organising their own maintenance.

"In technology dependant financial markets in which ANZ operates, there is obviously an extensive reliance on communications networks of the highest integrity," said Mr Ferguson.

ANZ Bank has merged its information technology units to a centralised operation, known as the Data Centre Utility.

This has allowed the bank to improve its customer service and cost control, while the contract to Entcom will provide increased control over the cost of supporting its networks.

The contract covers ANZ's ATM, EFTPOS, X.25 packet switched networks, data terminals and voice systems throughout the bank and its branch banking network.

"Entcom has employed multi-skilled staff and is engaging in program of cross skilled and education over the past couple of years," said Mr Ferguson.

"We have the necessary skills and expertise to conform to the bank's requirements, while our submission demonstrated a high degree of understanding of technical environment, needs and issues facing the bank."

APPM takes on Cabletron

Associated Pulp and Paper Mills has selected Cabletron Systems to support its Token Ring network in a move to maximise uptime and network reliability.

A Token Ring network connects all buildings on APPM's Shoalhaven site, supporting its production tracking system.

This tracking system offers customers precise status of their order at any given time and to improve the distribution staff of information to the using the system.

"As the paper making process is continuous, 24 hours a day, we had a requirement for built-in redundancy. This led us to look for robust equipment which would be able to cope with the demands placed on it in our environment," said Martin Stephens, Shoalhaven Mill's IT manager.

APPM has installed six 8 port hubs, a single 3 port hub and one 12 port STP Token Ring card in each of the hubs. The office hub has two cards and a dual power supply to carry the extra workload and users in the office.

The redundant power supply and auto-wrapping facility provided in the Cabletron equipment were major features considered by APPM.

"We have a fibre Token Ring backbone. If the ring is broken, the system automatically wraps and continues," explained Mr Stephens.

Seeing this network implementation as an evolutionary process, Mr Stephens said "we are just finishing the manufacturing and warehousing area, connecting into process control and automatic equipment.

"We currently have 30 workstations on the network, but over the next 12 months, this will grow as the network expands into the administration area and out to the stock preparation areas and the pulp mill."

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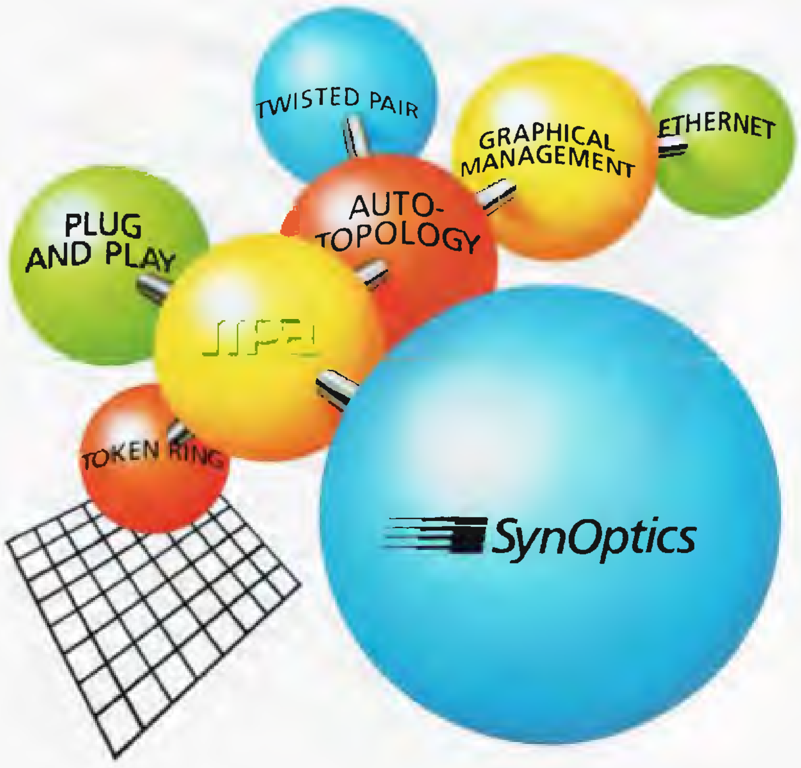

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Infrared links networks in two buildings

An infrared laser communication link was used to provide a realtime link between two PC networks in different buildings at the Comtec exhibition and conference recently held in Adelaide.

The link allowed Comtec organisers to centrally manage entrance, registration and administration database of attendees of various conferences held at the Adelaide Conference Centre and the product exhibition held at the Adelaide Exhibition Hall.

As the conference and exhibition only spanned three days, a cost effective solution was required.

ADE Network Technology and SA-based Custom Cable supplied the TeraBeam infrared laser communications links for the two networks, with one positioned on the top of each building to receive and send data.

Wayne Anderson, ADE's national sales manager, said the setup costs of the infrared communications link works out at half the cost of traditional dedicated line setup.

"While dedicated lines are limited to data transmission of 2M bits/s, Terabeam infrared laser links can transmit up to 10M bits/s.

"The infrared laser communications links are ideal for heavy data traffic between buildings up to a kilometre apart, even in high density metropolitan areas.

"More importantly, it is a much cheaper method of network to network data communication than leased or dedicated line installations and there is no ongoing costs involved," said Mr Anderson.

The seminar and conference building network consists multiple PCs, barcode readers, printers and 10Base2 multiport repeaters, while the exhibition and administration building has several PCs, a fileserver, Netcor NC 10Base-T hub and two barcode printers.

ABC Radio trials TAXI for ISDN

ABC Radio has installed eight TAXI terminal adapters for Ascom Timeplex as a twelve month evaluation process on the suitability of ISDN in metropolitan, regional and international broadcasting.

Replacing some Telecom terrestrial circuit with ISDN, ABC Radio expects to make substantial savings, while paying off initial equipment capital costs in one year.

ABC Radio will test the ISDN's reliability in domestic and international broadcast applications, as well as operational accessibility and ongoing costs.

Following the successful completion of the evaluation, ABC Radio will consider installing ISDN at most of its 48 regional centres around Australia and its network of 17 overseas offices.

The TAXIs were recently tested during the Wimbledon tennis championships which were brought to listeners with the assistance of TAXI adapters.

ABC Radio took the BBC Radio 5 broadcast and used ISDN to bring the coverage live to Melbourne. From here, the broadcast was relayed to Sydney and then on to other state capital cities.

The TAXI adapters will provide automatic bidirectional backup of ABC's leased London to Sydney line via cost effective switched services, ensuring that voice quality is maintained during communications failure using normal satellite circuits.

ABC Radio has replaced its Telecom network circuits used for redundancy purposes, and has been relying on satellite for primary circuits and using ISDN between capital cities during circuit outage.

It now has a bidirectional network as backup and is no longer limited to point to point communication.

"ISDN has proved an effective point to point communications medium in many mainframe departmental environments," said Brian Hancock, federal transmission manager for ABC Radio.

"But ABC Radio needs to evaluate ISDN in our own dynamic operational broadcasting environment. At present, trying to conduct broadcasts from overseas involves a long lead time in planning because you have to book the satellite circuits, and in a radio environment, cancelling circuits involves high penalty.

"ISDN offers dynamic dialing ability, backup of normal leased lines and ability to change from audio to data channels when necessary.

"We only pay for the services we use and ISDN offers significant savings over a dedicated line."

Two TAXI adapters are installed in the master control at ABC's Ultimo Centre in Sydney, and one each installed in the master control centres in Adelaide, Brisbane, Canberra, Hobart, Melbourne and Perth.

All TAXIs are connected to a main program switching network and driven by a customised software program.

The adapters in Sydney will be used for operational broadcasting while those in other capital cities will be used for backup.

Interconnect expands trading access to EDI

Greater access to EDI messaging for import, export and transport companies, particularly those communicating with the Australian Customs, is now available through a network interconnect service.

The EDI interconnect is a mainframe to mainframe connection using the LU 6.2 protocol to link the electronic networks of GE Information Services (GEIS) and Paxus Corp.

As a controlled file transfer operation, the interconnect uses the GEIS OPEN*NET software to perform file transfers. Control is achieved by a custom software developed by Paxus, which uses the OPEN*NET package as a building block.

A host, via the OPEN*NET VTAM LU 6.2 program, running as an MVS batch program under the control of VTAM and without a subsystem, communicates using the LU 6.2 protocol to another OPEN*NET product by GEIS.

Other members of the OPEN*NET system run under the control of CICS on the IBM based delivery platform and under the control of the Mark III system on the Bull platform.

The OPEN*NET FCM LU 6.2 program provides a defined application interface program, while the OPEN*NET FCM LU 6.2 program offers an advanced store and forward or pass through mailbox system that can communicate in a number of communications formats and platforms.

Clients of GEIS, which include Australian and international trade and transport operators, can now communicate with the customs by logging into the GEIS network using any of these formats or platforms.

EDI-based services from the customs include EXIT that issues export clearances, and the recently introduced Air Cargo Automation. A Sea Cargo Automation system will soon be launched.

"This interconnect will help make the Australian trade and transport industry more efficient and competitive," said Alan Rousselot, GEIS national sales manager, trade and industry.

"In particular, it means that GEIS can close the loop in trade between Australia and New Zealand for its clients by linking Australian export clearance procedures directly to New Zealand import clearance."

For over three years, the GEIS network has been carrying NZ Customs' CEDI FIT system, which now handles electronically more than 85% of the NZ import clearances.

GEIS has enhanced its service by integrating into its EDI Expression system the formats required by the Australian Customs for EDI messaging.

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115 on Information Card

Fibre optic cable tester

Black Box Catalog has introduced a flexible, cost effective pocket sized fibre optic tester for technicians to test light losses or locate individual cables in the electrical and communications wiring schemes in buildings.

The easy to operate unit is designed to provide computer installation and maintenance crews with a quick check facility for cable reliability by measuring light intensity and loss along cable lengths.

The user simply connects the tester to any SMA905 or ST type cable and takes a reading on the unit's calibrated LED scale.

Light energy loss over the length of the cable is estimated by subtracting the reading from -20dBm, the intensity of the unit's light source.

The tester provides a quick, accurate review of cable light throughput and integrity.

When used with a second tester, the tester can be used for locating cables in a patch panel. By sending a signal from the cable source with the second unit at the patch panel, users can pinpoint any individual cable.

The current fibre optic tester is powered by a 9V alkaline or nickel cadmium transistor battery and operates with any SMA type connector. An ST type tester is also available.

Black Box Catalog, 21-23 Maroondah Highway, Croydon 3136.

220 on Information Card

Print accelerator

Lexmark International has released a software package that reduces printing time for Windows applications.

The IBM 4029 Print Accelerator software can be installed on any IBM compatible PC running Windows 3.0 or 3.1 and linked to IBM 5, 6 or 10ppm LaserPrinters.

The Printer Accelerator also improves font handling. It rasterises Type 1 font for the printers allowing any Type 1 fonts to be used on the IBM 4029, even without ATM for Windows.

It is also fully compatible with Windows 3.1 Truetype font technology.

This means that Windows 3.1 users can get WYSIWYG with the default installation using the IBM 4029 with Truetype fonts which are built into Windows 3.1.

Free copies of the print accelerator will be bundled with all IBM 4029 LaserPrinters, while the company will send free copies of the software to existing IBM 4029 users.

Lexmark International, Level 3, Building 2, Pymble Corporate Centre, 20 Bridge Street, Pymble 2073.

221 on Information Card

Local area network cable

Alpha Wire's RG58C/U Type DEC Thinware from Gordon Technologies is a thin Ethernet cable.

This coaxial cable is suitable for IEEE 802.3 applications.

It has an aluminium/polyester/aluminium tape shield combined with a tinned copper braid shield giving 100% coverage.

The cable can be terminated with Link connectors, BNC crimp plug part number B10-029.

Gordon Technologies, 14A/172 Canterbury Road, Bayswater 3153.

222 on Information Card

Tools for AppleShare 3.0

Available from Conexus is Trik's Nok Nok Pro tools that address security, accounting and performance issues on AppleShare 3.0 servers.

Security is ensured as Nok Nok Pro watches guests logging in to the AppleShare 3.0 server and identifies the user.

Nok Nok Pro provides administrators accounting information on guests and registered users, along with net/node addresses, machine names, originating zones, and duration of login. It can be used to track departmental and individual usage statistics for charge backs and budgetary justification.

Nok Nok Pro enhances AppleShare 3.0 performance by allowing administrators to set disconnect times based on total connect or idle time. This results in an efficient server which can devote its processor time to users who need its services most.

Conexus, Unit 4-1, Skyline Place, Frenchs Forest 2086.

223 on Information Card

Product information is supplied by local agents and manufacturers. To receive further information on the products featured in Communications Engineer, fill out and return the reader information card in this issue.

X.25 synchronous comms board

Interworld Electronics has released the MPI-600 multiprotocol board from Quatech, which allows the PC computer to be used as a high performance serial communications device supporting both asynchronous and synchronous communications.

The MPI-600 is controlled by a 16MHz Intel 80C188 microprocessor and includes a 1Mb DRAM for program and data storage.

This on-board processor relieves the host computer from communications processing.

The board interfaces to the host PC through an 8Kb high speed static RAM, which appears in normal memory space of the MPI-600's microprocessor, as well as two FIFO buffers in the I/O space of the PC.

The MPI 600 uses an Intel 82530 serial communications controller (SCC) and features a high speed primary communications port and a lower speed secondary port.

The primary port supports X.25 interface at data rates up to 64K bits/s and can be configured for RS232/V.24, RS422/V.35 or current loop operation.

Fully selectable interrupt and DMA support are provided.

The secondary port supports a minimal asynchronous RS232C interface at 19.2K bits/s.

This port is typically used with an asynchronous terminal for debugging and monitoring applications.

Hardware support for asynchronous and BISync, HDLC, SDLC and X.25 communications are provided.

Software support for MPI-600 includes a multitasking realtime operating system kernel, a boot loader program for loading the board, PC interface libraries and X.25 support libraries.

The on-board 80C188 microprocessor allows users to develop customised programming tools using most available programming tools.

Interworld Electronics & Computer Industries, 1G Eskay Road, Oakleigh South 3167.

224 on Information Card

Dual port T1/E1/WAN

Hewlett Packard has released a dual port T1/E1/WAN option for the HP PT502 protocol tester.

Designed for R&D test engineers and service deployment staff performing end-to-end testing of SMDS and Frame Relay switching equipment, the new option reduces troubleshooting time by allowing the user to see network traffic from different technologies at the same time.

Users can select one of five interface configurations: dual port T1, T1 and E1, dual port E1, dual port T1 and WAN, and dual port E1 and WAN.

With the dual port T1 option, the network manager can test different protocols on different ports.

For example, the HP PT502 can be configured to perform active Frame Relay emulation and send traffic into one end of the switch while it monitors the other side of the switch with a different port running SMDS.

Traffic from both ports is organised and displayed in the order that it occurs so that any delays or problems can be easily identified.

Similarly, a Frame Relay-to-X.25 gateway can be tested with X.25 on one port and Frame Relay on the other port.

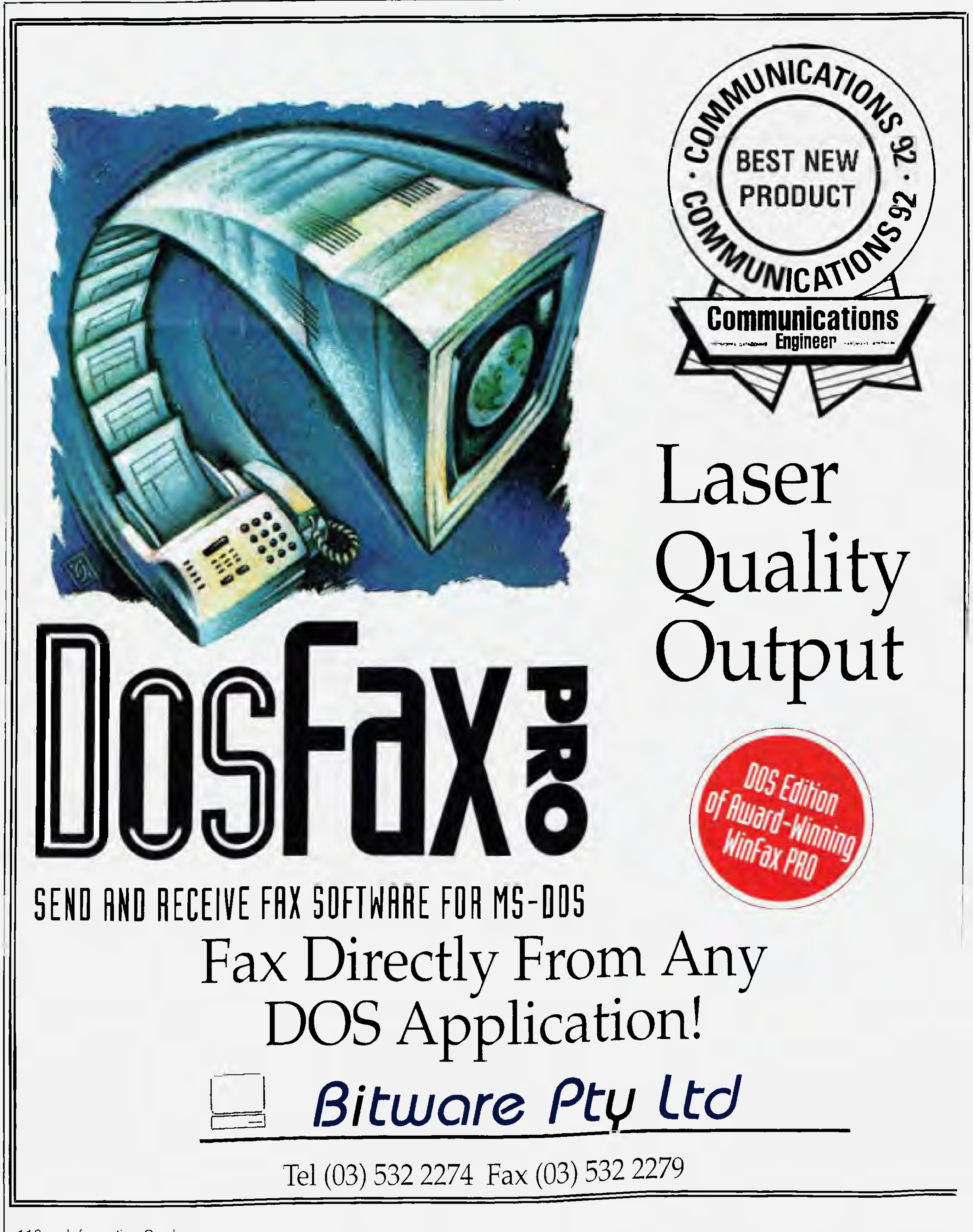
Since SMDS requires T1 or E1 access, end-to-end SMDS is now possible.

Customers can use the dual T1 option to simulate SMDS on one port and monitor the resulting transactions on the other port.

To increase the SMDS internetworking, SMDS bridges, routers and workstation manufacturers can use the dual T1 option to simulate an SMDS switch as a testing platform. The T1 and E1 option is useful for testing gateways or switches that have both the T1 and the E1 framing formats.

Contact Hewlett-Packard Customer Information Centre on 008 033 821.

225 on Information Card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116 on Information Card

PRODUCTS IN BRIEF

Network version A3 laser printer

Dataproducts has released network versions of the LZR 1560 and LZR 1555 A3 laser printers.

The LZR 1560 is an A3 size, 15ppm high performance printer with Adobe PostScript Level 2 and HP PCL4. The LZR 1555 features the same engine as the LZR 1560, but incorporates the Australian Pacific Semiconductor controller for high speed HP Series III PCL5 and HPGL plotting applications.

Both printers can now be connected to a variety of network operating systems and topologies, while increasing flexibility and throughput.

The first solution is for Novell NetWare 2.15 and NetWare 386 users, using either 10Base2 or 10Base-T cabling.

Dataproducts' XPN10 device plugs directly into the LZR 1500 parallel port and allows direct connection of the printer to the network. This means no PC is required to act as a print server and the LZR 1500 can be placed anywhere on the network. Installation is quick and easy.

The XPN10 eliminates the bottleneck caused by one byte at a time data transfer that traditional connections require, as all transfers are done at network speed.

This Dataproducts network enhancement product supports up to 40 print queues and up to 15 file servers on the network.

A set of utilities provided by Dataproducts adds to the functionality of NetWare by allowing naming conventions, status listing and changing initialisation.

The XPN11 is a plug-in card for a PC that acts as a fileserver or remote workstation and permits the LZR 1500 to be directly connected. The speed of XPN11 card speeds up the host PC and is transparent to the user.

The increase in printing speed using the XPN11 solution is from six to 50 times, depending on graphics applications.

The XPN11 works with Token Ring, Ethernet and Arcnet topologies and supports Novell NetWare 2.15 and ELS II, NetWare 386, LAN Manager and Banyan Vines.

Up to two LZR 1500 printers can be supported per plug-in board and up to three boards can be installed per server.

Dataproducts, Unit 2, 10 Rodborough Road, Frenchs Forest 2086.

226 on Information Card

Fibre optic connector

Utilux has released the Molex Mx11, an ST11 Series 86013 fibre optic connector which is available in standard and non-optical disconnect versions.

The connector range is fully compatible with existing ST and ST11 type connector hardware.

It operates by loosening and tightening the strain relief boot assembly. Once fully tightened, the connector can not be removed and the internal axial travel of the contact is limited to prevent optical disconnect.

Specifically designed for the telecommunications, data and CATV applications, the product range meets Bellcore TR-NWT-000326, Issue 2 specifications.

Available in single and multimode, the connector range is field installable and has ST compatible bayonet coupling with a locking nut feature.

Utilux, 14 Commercial Road, Kingsgrove 2208.

227 on Information Card

SCSI-to-Ethernet adapter

Cabletron Systems has released a manageable SCSI-to-Ethernet adapter that enables any Apple Macintosh to be connected to Ethernet networks via the computer's SCSI port.

An on-board intelligent processor handling packet filtering and network management functions improves the Macintosh performance and provides a reliable connection to Ethernet.

Macintosh platforms supported are Classic, Classic II, Plus and the recently launched Apple PowerBook. Macintosh Classics and PowerBooks, which have no internal expansion slots, can also be connected via the SCSI port to the network using the adapter.

The adapter can be managed from any SNMP-compliant network management platform, including Cabletron's Remote LanVIEW/Windows and Spectrum advanced Unix-based management platform.

It also features Cabletron's LanVIEW system of LEDs, providing an accurate visual indication of adapter performance status.

Two models are available: the EA412 adapter comes with one BNC connector and one RJ45 port; and the EA419 has a single RJ45 port. Both models are designed for use with unshielded twisted pair and thin coaxial cabling.

Cabletron Systems, Unit 8, 112/118 Talavera Road, North Ryde 2113.

228 on Information Card

Ethernet adapters

Sourceware has released the D-Link DE-220 Series Ethernet cards with no physical jumpers, which are configured through a software program.

The switchless DE-220 Series cards can be plugged into 8 or 16 bit ISA buses interchangeably, and a diagnostics program provides the operational status of the cards.

The first of the cards in the series to be released is the DE-220CT, an adapter that supports UTP or 10Base-T and thin coax or BNC connections.

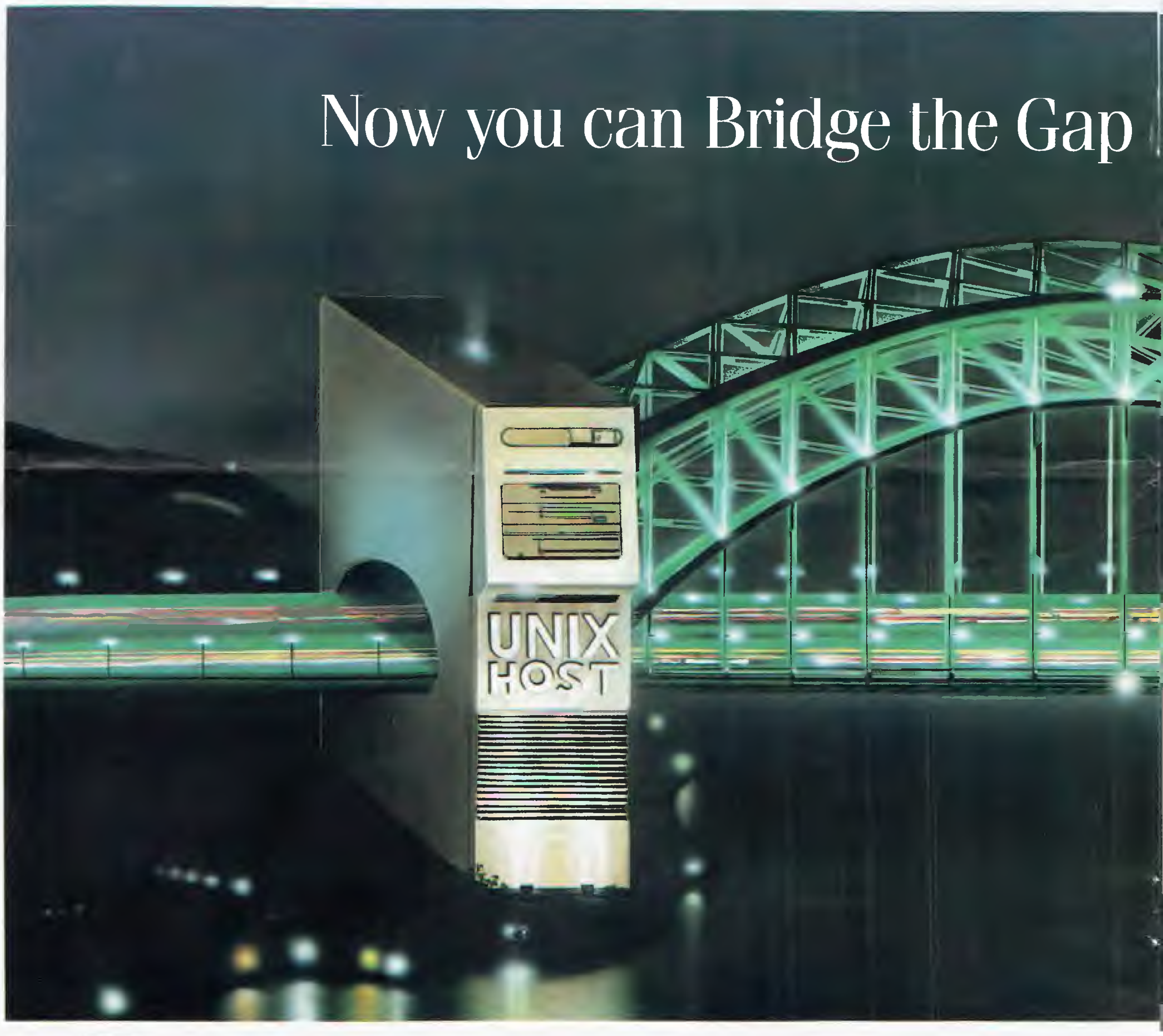
Other features of the series include direct use of NE-2000 drivers; RIPL boot ROM (optional) for remote booting from Novell and LAN Manager; and POST, a power-on self-testing program for the card that runs once the computer is turned on.

All cards in the series have four built-in LEDs to report network activity, such as Power/XMT, Link/RCV, Jabber and Collision.

Drivers are provided with the adapters to support 3Com 3+Share, SCO Unix/Xenix, Banyan Vines, DEC Pathworks, IBM LAN Server and PC LAN Support Program, Microsoft LAN Manager, NDIS, NetBIOS, Netware 2.x, 3.1x and ODI, FTP PC/TCP, Sun PC-NFS and Interactive Unix.

Sourceware, Unit 1, 6-8 George Place, Artarmon 2064.

229 on Information Card


Now you can Bridge the Gap
UNIX
HOST

Now with Novell's NetWare NFS and LAN WorkPlace products, you can integrate your computer operating systems to create a single system that works more efficiently.

Novell's NetWare NFS software transparently integrates Unix systems with the NetWare v3.11 environment enabling the NetWare server to provide Network File System file services and Line Printer Daemon print services to Unix NFS clients.

LAN WorkPlace for DOS provides DOS and Microsoft Windows users with concurrent access to Unix systems and other Novell network resources using the TCP/IP protocol suite. Its ease of use, low memory consumption, high performance and reliability make LAN WorkPlace the ideal choice. And there are versions of LAN WorkPlace for OS/2 and MacIntosh.

NetWare NFS and LAN WorkPlace are backed by the extensive resources of Com Tech - Australia's leading Open Systems distributor. Com Tech's depth of expertise in network installations is evidenced by the fact that over 50% of our staff are dedicated to technical service and support. And there are dedicated specialist Novell and Unix technical support teams available to facilitate the smooth integration of your computer system.

So if your organisation is running independent operating systems, bridge the gap with NetWare NFS and LAN WorkPlace.

Printer LAN connection

Lexmark International has released two IBM 4033 LAN adapters that allow IBM printers to attach directly to a Token Ring or Ethernet network at any point.

As well, the company announced that current models of the IBM 4033 LAN Connection now support Microsoft LAN Manager 2.0 or higher and IBM OS/2 LAN Server 2.0.

Customers now have the capability to connect all IBM or compatible printers directly to Novell NetWare, IBM OS/2 LAN Server, Microsoft LAN Manager and IBM AIX LANs.

The IBM 4033 LAN Connection consists of a network printer adapter and a software utility. The adapter contains one parallel and one serial port that can be used concurrently to support two printers or a printer and a plotter.

The IBM 4033 LAN Connection operates transparently to LAN users and each IBM 4033 can support up to 10 Novell file servers and 32 print queues.

It is easy to install using a graphical user interface software utility included with the system. It is also Novell NetWare compatible and compatible with most non-IBM Centronics parallel printers.

Lexmark International, Level 3, Building 2, Pymble Corporate Centre, 20 Bridge Street, Pymble 2073.

230 on Information Card

Data acquisition on Ethernet

APC has introduced an Ethernet-based data acquisition device, the I/O Station 464.

The device allows workstations to capture test data directly so that the workstation can immediately analyse data at high speed.

Other advantages of connecting the data acquisition device directly to a workstation include multiple user access and Ethernet's ability to connect up to 500m of cable.

The I/O Station 464 has four IEEE-P996 slots for plug-in modules. The unit accommodates up to 64 analogue inputs, 32 analogue outputs, 640 digital I/O, or 96 counter timer channels. The modules can acquire data at resolutions to 16 bits at up to 1MHz.

APC, 40 Stepney Street, Stepney 5069.

231 on Information Card

Fibre optic fault locator

Kingfisher International has available an improved visible fault locator option for its handheld KI8000 dual light source.

The Option 865 provides over 0.5mW of light at 650nm into a single mode fibre, which enhances visibility over the currently available 670nm instruments.

This option is suitable for locating bad splices, breaks and other problems in fibre cabling. A bright red light is injected into the fibre and is clearly seen leaking out of faulty areas, even through a 3mm cable construction. It is also useful for fibre identification.

As well, the K18000 dual light source can be fitted with a wide variety of LEDs and lasers at 850, 1300 and 1550nm with a choice of connector. A single 9V battery will give over 20 hours of operation.

Kingfisher International, 4/19 Viewtech Place, Rowville 3178.

232 on Information Card

Dual port BNC repeater

Integrated Networks has announced the LE-10B2N, a dual port BNC repeater module for MultiNet multimedia smart hubs.

The LE-10B2N is compatible with IEEE 802.3 repeater and 10Base2 specifications. Each port supports a thin coax segment of up to 185m, replacing an external standalone multiport repeater.

It allows thin coax segments to be directly connected to one of the two Ethernet buses in the MultiNet hub. When used with LANNET's fibre optic UTP dual bus modules, a flexible and efficient LAN solution is provided.

The LE-10B2N connects to one of two Ethernet segments within the hub interconnecting multiple coax segments to different networks within the MultiNet multiple LAN intelligent wiring enclosures.

Several LE-10B2N modules can be installed within the MultiNet hubs, providing a modular multiport repeater. The module is fully manageable under MultiMan, LANNET's SNMP management system and allows monitoring, administration of control of ports and traffic from a remote console.

MultiMan offers performance collection, event reporting and analysis of the LE-10B2N down to the port level. Additionally there are two levels of automatic backup which help ensure network uptime.

The LE-10B2N module's LAN redundancy feature provides automatic switchover between segments if one of the internal segments fails. Port redundancy is also provided, with automatic switchover in the case of a BNC segment failure. Reconnection is also automatic when normal operation resumes.

It can operate in a standalone mode, serving as an independent dual port repeater.

Integrated Networks, 26 Tepko Road. Terrey Hills 2084.

233 on Information Card

Flash memory router family

Cisco Systems has introduced a new router platform with the Cisco 3000, a three member family of fixed configuration, multiport devices offering standard Flash EProm memory for easy updating and increased memory expandability to accommodate network growth.

The new routers complement Cisco's three IGS models, low end units with limited memory expansion and no Flash memory, for which the company has reduced price by 20%.

The Cisco 3000 provides a platform that enables Cisco to support ISDN technology. Future versions will incorporate an ISDN Basic Rate Interface (BRI) into the router chassis, in fulfillment of Phase III of Cisco's four phase circuit switching data communications strategy.

The Cisco 3000 Series offers complete multiprotocol routing and bridging in three configurations, including a version with two Ethernet ports for local LAN-to-LAN connectivity, and a version with one Ethernet and one synchronous serial port for remote Token Ring internetworking.

All units use the same multiprotocol routing and bridging software that is standard across Cisco products. The Token Ring version uses Cisco's implementation of IBM source route bridging (SRB) for non-routable protocols, with SRB packets encapsulated in IP packets. A virtual ring feature eliminates the SRB's seven hop limit.

The routers are based on a 20MHz MC68030 processor, achieving approximately 25% greater performance than the 16MHz MC68020 used in two of the three IGS models (the IGS Token Ring also uses the MC68030). The units are housed in a combat chassis measuring 330x350x100mm.

Cisco Systems Australia, 495 Victoria Avenue, Chatswood 2067.

234 on Information Card

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CT 2821 CE

117 on Information Card

PRODUCTS IN BRIEF

Fully featured LAN tester

The new LANcat 1500 automatic LAN cable and activity tester from Datacom Technologies offers functions needed to service the needs of the LAN manager or the cable installer.

The LAN tester can produce full cable certification for both coax and twisted pair, as well as four custom cable definitions. It can handle NEXT (near end cross talk), attenuation, TDR (accuracy of 1%), wire map functions and noise and live traffic monitoring.

Up to 50 cable certification reports can be stored in the instrument for later dumping to a serial printer.

The LANcat 1500 has an easy to use rotary function selector that eliminates multi-level menus, and a four line x 16 character LCD.

The tester can withstand telephone loop, ringing and transient voltages making it suitable for cable installers working on telephone networks,

It is supplied complete with remote load, ac adaptor, RJ45 patch cables, RJ45 clip lead set and operator manual, all housed in a zippered carrying case.

Elmeasco Instruments, 18 Hilly Street, Mortlake 2137.

235 on Information Card

HARDIE NETWORKS NEWS

Quality service recognised

Hardie Networks has for a long time been recognised by the market as being a supplier of the highest quality goods and services. We are pleased to advise that this recognition is now official as indicated by the recent Australian Standards Quality System Audit.

Hardie Networks met the requirements to conform to AS3902 and has been recommended for Accreditation by the Auditors.

However we will not rest on our laurels and our customers can rest assured we will continue to seek more ways to provide a better service.

MOTOROLA
ALTAIR PLUS

Motorola Inc.'s Altair Product Operations of Arlington Heights Illinois USA, has appointed Hardie Networks to distribute their ALTAIR PLUS™ Wireless Local Area Network. The system comprises Control Modules which connect to the central server (computer) and User Modules to which the terminals connect. The terminals and computer communicate via secure radio transmission. Areas up to 50,000 sq.ft can be covered, depending upon building construction, by a single Control Module. Fifty terminals can be serviced within this area with up to 8 terminals per User Module. Motorola, Altair and Altair Plus are trademarks of Motorola Inc.

Level 5

Hardie Networks advise 'AUSTEL' approval for Belden Level 5 (100 Mbps) unshielded twisted pair (UTP) product code 1583A. Certified Component Listing – A92/CA/0164

New State Manager for Victoria

James Impey joins us as State Manager Victoria.

With a background in the electrical trades/micro electronics industries, the mainstream computer industry and most recently James' involvement with the Digital Equipment Corporation OEM will greatly enhance the wide base of experience at Hardie Networks.

HARDIE NETWORKS
Vic. Tel: (03) 890 0900
Fax: (03) 899 0819
Also in NSW, QLD, SA, WA, TAS, NT, ACT.

118 on Information Card

Multi-protocol communications server

Available from GEC Electronics Division is a serialHUB M250 Ethernet terminal server that connects users through a single network connection to a number of host machines on a LAN.

With SNMP support, the serialHUB M250 can be managed from a central station and can report network statistics and other data. From a single terminal line, a user can have several connections to hosts that support either LAT, TCP/IP or OSI.

There are eight connections available per line and sessions can be mixed on one line. The serialHUB M250 provides eight, 16, 24 or 32 serial RJ45 lines for terminals, printers and other serial devices, along with a Centronics compatible parallel port.

The terminal communications server provides the throughput to run all lines at high speed rates, while each of the 32 lines can be configured at 38.4K bits/s.

By providing a multi-protocol platform, the Interphase serialHUB M250 can grow with the users' network to meet future requirements. The TCP/IP protocols are provided by Spider Systems and the LAT technology is licensed from DEC.

According to the company, the serialHUB is the only terminal server to provide Gosip compliant ISO/OSI protocols. Regardless of the protocols used, users are assured maximum interoperability.

GEC Electronics Division, Unit 1, 38 South Street, Rydalmere 2116.

236 on Information Card

Fibre optic power meter

Available from Kingfisher International is an InGaAs detector option for its KI6000 optical power meter.

Offering a high level of accuracy, the instrument is virtually unaffected by temperature effects, featuring a calibration variation of only ±0.01dB over 0 to 50°C.

At 1300 and 1550nm, the instrument reading has hardly affected by wavelength variations typically experienced in real applications. A measurement range of +5 to -70dBm is complemented by a high level of linearity.

The KI6000 optical power meter features a full range of optical connector adapters which are designed to reduce the effects of reflections on measurement accuracy.

Both absolute and relative dB levels can be displayed, and measurement update is instant. In relative mode, a separate reference value for each wavelength can be stored indefinitely, and can be displayed if needed.

Complementary accessories include a rubber holster, hard or soft carry cases and optical patch cords made to user requirements.

Kingfisher International, 4/19 Viewtech Place, Rowville 3178.

237 on Information Card

Multimode fibre optic switches

DiCon's On-Off, 1x2 and 2x2 multimode fibreoptic switches are component style switches with high stability and typical losses of 0.5dB.

These optically passive switches, using a patented moving fibre technology, operate independent of wavelength, transmission rate and signal format.

The On-off switch provides a means of interrupting an optical signal and is used to isolate sources and receivers in test equipment and high security networks.

The 1x2 switch is a two position device to enable channel selection. It is used for diverse route switching as well as for dual source/receiver selection.

The non-blocking 2x2 switch is for node bypassing in Token Ring LANs, while the blocking 2x2 switch is used for repeater bypassing.

Features include low insertion loss, good repeatability, high channel isolation, broad wavelength range, environmentally stable, and simplex and duplex options.

Krone Technique, 2 Hereford Street, Berkeley Vale 2259.

238 on Information Card

Low price-per-port module

JN Almgren has released the Fibermux CC6613EZ/16, a 16 port, single wide Ethernet I/O module for the Crossbow family of multi-LAN hubs.

The module makes use of new semiconductor technology which the company says reduces its per-port cost. It reduces networking costs by increasing the number of workstations that can use a single hub.

When used with the CrossbowPlus FX6700 14 slot hub chassis, the CC6613EZ can accommodate up to 224 workstations in one hub. Previous Fibermux 10Base-T modules featured 10 ports in the same single wide I/O slot.

The CC6613EZ/16 uses the National Semiconductor repeater interface controller (RIC) technology, a one-chip multiport Ethernet signal repeater.

Fibermux has designed Ethernet signal repeating capabilities into all of Crossbow's I/O modules, instead of in a single repeater module for the entire hub chassis.

With this distributed repeater configuration, a failure of any module affects only the workstations connected to that module.

Other features implemented are redundant power supplies, passive backplane and port equivalency that avoid a single point of failure in the Crossbow and CrossbowPlus chassis.

The CC6613EZ/16 has a polarity detection and correction feature that can detect a polarity reversal on the 10Base-T cable.

The module compensates for the reversal so that the network continues to operate, while network management and a front panel LED alert the network manager of network problems.

JN Almgren, 16 Smith Street, Chatswood 2067.

239 on Information Card

Cross-platform networking

Cross-platform networking offered by SuperOffice 2.0 allows Macintosh and PC/Windows users to share the same data file on a common network without conversions.

This cross-platform networking offers companies with a shared access to background information and historical data on customers, prospects, media reps, employees, vendors and other day-to-day contacts.

SuperOffice 2.0 is written in C and operates faster, allowing users to move freely and quickly throughout the system is to update contact files, schedule meetings, send letters, faxes and proposals, and prepare management reports.

SuperOffice consists of five modules. Customers from Customers is an easy to use data base.

From Customers, a user can access diary, follow up for tracking past and planned activities, templates for sending documents, and reports for generating management reports and mailing labels

Conexus, Unit 4-1 Skyline Place, Frenchs Forest 2086.

240 on Information Card

Training, conferences & exhibitions diary

SEPTEMBER

September 7-11, Sydney

Australian Data Communications: a two day introductory seminar on data communications and connectivity is followed by a three day advanced course and network design.

Contact: Housley Communications on (02) 499 2666 or 008 226 776, fax (02) 498 7669.

September 7-11 and 14-18, Sydney

CNE in the City: is a full time Novell CNE training course.

Contact: Future Technologies on (02) 299 1400, fax (02) 299 1401.

September 8-11, Melbourne

AUUG '92: Australian Open Systems Users Group annual national conference & exhibition is to be held at Melbourne's World Congress Centre.

Contact: Ellen Gubbins, AUUG Media Liaison, Symmetry Design, (02) 973 1992, fax (02) 973 1997.

September 9-11, Canberra

EDI: a three day course covering all aspects of electronic data interchange in both its current and planned implementations.

Contact: Housley Communications on (02) 499 2666 or 008 226 776, fax (02) 498 7669.

September 14-16 and 28-30, Sydney

NetWare V3.11 System Manager: a three day course covering day to day management of NetWare 3.x LAN.

Contact Future Technologies on (02) 299 1400, fax (02) 299 1401.

September 16-18, Melbourne; September 23-25, Sydney

PC Communications and LANs: a three day seminar covering PC networking connections and standards, as well as LANs and LAN environment considerations.

Contact: Housley Communications on (02) 499 2666 or 008 226 776, fax (02) 498 7669.

September 22, Melbourne; September 23, Canberra; September 29, Sydney; September 30, Brisbane

Naming and Addressing in the OSI Environment: a one day OSI seminar held by Standards Australia.

Contact Seminar Services, Standard Australia on (02) 963 4111, fax (02) 959 3896.

September 23-25, Sydney

Cabling Design & Management: over three days, this course provides technical and operational knowledge, covering traditional and contemporary methods of interconnecting systems and devices.

Contact: IRR Technology on (02) 959 5455, fax (02) 959 4687.

September 24, Sydney

Understanding Open Systems Interconnection: the NITC is holding a half day seminar to look at implementing and maximising OSI standards with an open systems environment, as well as the business rationale, technical considerations, current government policy and future directions of OSI.

Contact: The Australian Computer Society on (02) 283 5544.

September 28-October 1, Sydney; October 6-9, Canberra

OSI & Gosip Explained: a three day OSI technical workshop is followed by a one day seminar explaining Gosip.

Contact: Housley Seminars on (02) 499 2666 or 008 226 776, fax (02) 498 7669.

September 30 – October 2, Sydney; October 5-7, Melbourne

Messaging Systems: this three day course provides a guide to product evaluation and procurement, discussing extensions to X.500 standards.

Contact: TTC on (02) 959 4229, fax (02) 954 1265.

OCTOBER

October 7-9, Melbourne; October 14-16, Sydney

TCP/IP Networks: a two day course exploring TCP/IP concepts, troubleshooting techniques, TCP/IP in Unix environment, as well as bridges, routers and gateways.

Contact: IRR Technology on (02) 959 5455, fax (02) 959 4687.

October 12-13, Sydney

Digital Mobile Communications & The Third Mobile Licence: a two day conference highlighting the impact of competitive mobile communications for the Australian industry.

Contact: IIR on (02) 954 5844, fax (02) 959 4684.

October 12 -14, Sydney; October 27-29, Melbourne

Internetworking: a three day seminar providing an understanding of principles, equipment, standards, product implementations and underlying networks.

Contact: Housley Communications on (02) 499 2666 or 008 226 776, fax (02) 498 7669.

October 19-21, Sydney

Token Ring: this course covers advanced concepts and troubleshooting of Token Ring networks.

Contact IRR Technology on (02) 959 5455, fax (02) 959 4687.

October 19-23, Canberra

Australian Data Communications: a two day introductory seminar on data communications and connectivity is followed by a three day advanced course and network design.

Contact: Housley Communications on (02) 499 2666 or 008 226 776, fax (02) 498 7669.

October 20-22, Sydney

Communications '92: a conference on communications, technology, services and systems, sponsored by the Institution of Engineers, Australia, is to be held at the Hilton Hotel.

Contact: The Convention Administrator on (06) 270 6559, fax (06) 273 2012.

October 26-28, Melbourne; November 9-11, Sydney

LAN Design and Implementation: a course to evaluate, design, implement, maintain, utilise and support different LANs.

Contact: IIR Technology on (02) 959 5455, fax (02) 959 4687.

NOVEMBER

November 4-6, Canberra

PC Communications and LANs: a three day seminar covering PC networking connections and standards, as well as LANs and LAN environment considerations.

Contact: Housley Communications on (02) 499 2666 or 008 226 776, fax (02) 498 7669.

November 9-13, Melbourne

TENCON '92 with the theme Technology Enabling Tomorrow, the IEEE Region 10 International Conference and Exhibition, is to be held at the World Congress Centre in Melbourne.

Contact: Marg Scarlett, Conference Manager, (03) 646 4122, fax (03) 646 7727.

November 9-13, Melbourne

Australian Data Communications: a two day introductory seminar on data communications and connectivity is followed by a three day advanced course and network design.

Contact: Housley Communications on (02) 499 2666 or 008 226 776, fax (02) 498 7669.

Fax transmission within Windows

Interlink Electronics has introduced Delrina Technology's WinFax Pro for use with the FaxModem-3.

Featuring Group III, 9600 bits/s operation, WinFax Pro can send and receive faxes from within any Windows 3.0 application.

The software combines any Windows 3.0 document into a single outgoing fax. Sending of fax is initiated by clicking the mouse.

Using an Interlink Fax-Modem, a fax sent by WinFax Pro allows users to merge files from several documents, which may incorporate graphics and illustrations. Its 200 dpi resolution produces a laser quality presentation.

"The package can broadcast to predefined groups or sub-groups; add individually addressed cover pages; and be programmed to transmit at a predetermined date and time, even when the machine is unattended, all within the Windows 3.0 environment," said Rick Spielrein, Interlink Electronics' general manager.

"Incoming faxes are handled just as easily. WinFax Pro can receive faxes in the background, announcing their arrival.

"The fax can be automatically printed, displayed on the screen or held for later viewing," Mr Spielrein said.

Interlink Electronics, 118-122 Queen Street, Woollahra 2025.

246 on Information Card

Routers improve efficiency

The efficiency of sending TCP/IP data across low speed serial lines and X.25 networks has been improved with a header compression feature of Cisco Systems' internetworking routers.

Cisco is the first multiprotocol router vendor to implement the IETF RFC1144 standard for header compression, which increases the speed of interactive TCP/IP sessions over serial lines slower than 56K bits/s.

Header compression will be available as a standard, no cost feature on new Cisco routers, which began shipping mid August.

Cisco supports RFC1144 TCP/IP header compression on serial lines using HDLC encapsulation and on X.25 networks.

Cisco Systems Australia, Level 8, Prudential Centre, 495 Victoria Avenue, Chatswood 2067.

241 on Information Card

Twist-to-flat cables

Gordon Technologies has available a 50 pair twist-to-flat cable from Alpha Wire.

The cable is suitable for reducing cross talk in high speed data transmission in computers, cash registers and communications equipment.

Conductors are tinned copper, insulation is semirigid polyvinyl chloride with double laminated film backing. Standard packaging is available on 91.5m continuous reels.

Gordon Technologies, 14A/172 Canterbury Road, Bayswater 3153.

242 on Information Card

Vines for SCO Unix

Banyan Systems has announced Vines for SCO Unix in its new Vines on Unix product line, which offers users a cost effective Unix to PC connectivity.

Banyan's Vines on Unix product line complements its flagship Vines network operating system product family and is the first offering for the company's commitment to support multiple network and operating system environments with enterprise network services.

These services comprise an integrated array of networking software that simplifies or eliminates complex networking tasks within the enterprise.

Vines for SCO Unix provides an easy to use and manage enterprise network solution for customers requiring Unix and PC connectivity. The enterprise network services run directly on the SCO Unix operating system, converting the SCO platform into a Vines enterprise network server.

The Unix to PC connectivity offering enables users to share files and printers by means of standard Unix protocols, including TCP/IP, NFS and LPR. This also provides connectivity to Unix platforms such as DEC, HP, IBM, NCR, SUN and others.

As well, customers can run SCO Unix applications and the enterprise network services on a single server.

Banyan Asia Pacific, Suite 404, 77 Berry Street, North Sydney 2060.

243 on Information Card

Mounting system

Krone has released the Profil, a mounting system to enhance the flexibility of Krone wiring systems.

Features of the Profil include: Austel permitted and labelled; modular installation with existing frame; simple installation; variable spacing and neat appearance; easy maintenance; and pre-packaged options available; enhanced cable access and EIA568 compliant.

Krone Technique, 2 Hereford Street, Berkeley Vale 2259.

244 on Information Card

OS/2 client software

Available from Sourceware is DCA's Select Client for Presentation Manager, an OS/2 2.0 compatible client software for use with the DCA/Microsoft Select Communications Server 1.1.

Select PM Client supports ten 3270 sessions for display and printer emulation and 64 concurrent logical unit (LU) 6.2 sessions.

Users can increase productivity by simultaneously running multiple host applications, terminal and printer sessions, background file transfers and APPC transaction programs.

As well, Select PM Client provides auto-sizing of display fonts. When users change the window size, the font size adjusts proportionally for the 3270 session.

Its installation procedure enables the LAN administrator to install the client software once on a server for distribution to multiple users, eliminating the need to install different PCs throughout the network.

As a client to Communications Server 1.1, Select PM Client supports a wide-range of connectivity options to host computers, including distributed function terminal (DFT), synchronous data link control (SDLC), Token Ring and X.25 connections.

Sourceware, Unit 1, 6-8 George Place, Artarmon 2064.

245 on Information Card

Optical power tester

The Seiko SX-101 from Fibernet features a stable 850nm LED light source and a full function optical power meter in a compact battery powered instrument.

Suitable in optical fibre communication line, field and bench applications, the SX-101 optical power tester has relative dB, absolute dBm and mW to nW readouts of optical power.

The unit includes one touch selection of relative of absolute level. A user selectable threshold buzzer function is provided for ease of repetitive connector loss measurement.

Fibernet, 24 Laser Drive, Rowville 3178.

247 on Information Card

External LAN adapter

The Kodiak NotePort from RAE Industrial Electronics ports notebook or laptop to an Ethernet LAN, supporting 10Base-T and coax cabling.

The unit comes with a parallel port pass through for easy access to local printer. It features small form factor, pre-built software drivers and built-in power supply. The NotePort has one step installation, easy connect/disconnect and increased mobility.

RAE Industrial Electronics, 62 Moore Street, Austinmer 2514.

249 on Information Card

MailLink directory services

Conexus has released MailLink Directory Services, an integrated software package that provides Macintosh users with the ability to look up names, correct e-Mail addresses and other information about users in heterogeneous networks.

Software modules included in MailLink Directory Services are:

❑ DS Server which as a central application runs on a Macintosh to accept users' look-up requests generated within the mail application, or through the DS Agent and forwards this request to a DS access module for processing;

❑ DS Access Modules for Unix, MHS, QuickMail, MS-Mail and Fast File run on the same Macintosh as the DS Server, performing the actual look up in a specific name space and return the found entries to the DS Server;

❑ Fast File Database is a Mac database software that provides a central area to store a range of data;

❑ MailRoute, which is an administrator's interface where the names of e-Mail gateways on the network can be entered.

MailLink Directory Services does not use e-Mail gateways to perform its functions. It also does not provide for e-Mail connectivity between diverse systems.

Conexus, Unit 4-1, Skyline Place, Frenchs Forest 2086.

248 on Information Card

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SynOptics

119 on Information Card

The 2705 Token Ring hub.

The 2715 managed Token Ring hub.

The System 3000 managed Token Ring hub.

AllNET seeks SIs for new AT&T cable agency

by Richard Chirgwin

John MacDuffie (left), then managing director of AT&T Australia, and Patrick Doyle, managing director of AllNET, after signing the distribution contract.

The appointment of AllNET as the first distributor in Australia for AT&T's Systimax structured cabling system (SCS) is expected to open new marketing opportunities for both companies.

For AT&T, the distribution agreement is aimed at finding a new customer base. Until now, Systimax has been only available in Australia as part of complete system solutions from the company's VARs. These include Honeywell, Austwide (Wang) and Comnetworks.

According to AT&T, the AllNET appointment is designed to complement, not replace, existing AT&T marketing in this country.

"VARs focus on their core customers," said Sal DeCaro, AT&T's managing director for Systimax PSD products, Asia Pacific.

"Distribution through AllNET will give us broader reach and penetration, both geographically and into new market segments."

He said the agreement would give AT&T the chance to expand in various markets, including financial and banking networking, mining and industrial applications, and the government sector.

System integrators

AllNET currently has four system integrators appointed to offer Systimax products, and plans to expand this number to twenty-five.

Entcom, FDC, Security Communications and Egerton are the current Systimax system integrators.

As well, both companies will be working to give Systimax a higher profile in the market, and also to raise awareness of the importance of cabling as part of overall IT strategies.

"Premises distribution systems are already a key product for AT&T, and this importance will grow with the growth of intelligent buildings," Mr DeCaro said.

AT&T also sees a shift in the market towards branded systems, especially for key infrastructure components such as cabling.

"The clients are looking for guarantees of the integrity of their networks and of the openness of their cabling solutions," said Royce McDonald, Systimax sales director for AT&T Australia.

"There are around 2000 components in the Systimax range, so an entire cabling system can be created from a single manufacturing source. We find this gives customers a high degree of confidence.

"Our own confidence in the product is expressed in our ability to offer a five year warranty on the system."

Documentation

AT&T also cited the quality of the documentation provided to customers as an important product differentiator.

According to AT&T's outgoing managing director John MacDuffie, AllNET had to compete against a number of organisations to win the distribution agency in Australia.

"They showed us that they had complete commitment to AT&T, and we were impressed with their aggressive approach to marketing," he said.

AllNET's managing director Patrick Doyle expects the AT&T cabling system to become a key product for his company, with the potential for revenues in the millions of dollars.

"Customers are beginning to realise that, although the dollar investment in cabling is a relatively small part of the total system, the cabling is critical to the movement of data," he said.

"We decided to seek the AT&T agency because we feel they offer significantly higher quality systems and strong support, and because of end-user demand for quality cabling."

There are three product ranges under the Systimax banner. The PDS (premises distribution system) is AT&T's mainstream network cabling range, and is currently specified for up to 100M bits/s data over twisted pair cables.

The Systimax IBS (intelligent building system) is an enhanced range which allows communications, data processing, energy management, lighting control and security to be integrated into a single system.

For industrial applications, the Systimax IDS (industrial distribution system) uses fibre optic cabling to move large amounts of information at high speed around industrial facilities.

The IDS operates communications systems, LANs, computers, sensors and industrial equipment, and is designed to withstand harsh environments.

Fast WANs can use old copper plant

by Richard Chirgwin

A product originally developed to extend the life of copper plant owned by Telecom New Zealand has resulted in an internetworking product that offers users 128K bits/s transmissions over distances of 7km.

Released in July by Datamatic after it achieved Austel approval in June, General Datacomm's MDTU (metropolitan data transport unit) uses 2B1Q encoding to achieve its high speed. The two wire, echo cancelling 2B1Q standard is described by GDC as "supplanting existing baseband modem standards."

However, Datamatic emphasises that the MDTU is "more than just a baseband modem," with features such as asynchronous to synchronous coversion and multiplexing included in its offerings.

Already, efforts are being made to extend the distance the MDTU can operate. General Datacomm is currently working in Australia with Alcatel and Siemens to achieve transmissions of up to 12km from the MDTU.

Around 2000 units have so far been supplied to Telecom New Zealand, and GDC emphasises that since the original target market for the device was telecommunications carriers, the MDTU has been designed to offer high reliability and redundancy.

For example, internal modules of the unit all carry their own on-board dc power supply, and only draw their ac power from the rack supply, so all cards can be hot swapped in case of failure.

The public release version of the MDTU has been modified to provide enhanced user features. All the features offered to the carriers have been made available on the front panel for ease of use.

At the heart of the MDTU is a service definition module (SDM), which creates the electrical interface required by the user. Several SDM versions are available, supporting V.24, V.35, X.21, G.703 and 128K bits/s user interfaces.

For 128K bits/s operation, the MDTU also needs a V.35 or X.21 interface to be installed.

As well, General Datacomm and Datamatic are currently investigating other possible electrical interfaces for the Australian market. R&D is currently underway for a 64K bits/s SDM supporting voice transmissions; if and when it is developed, General Datacomm intends to manufacture this SDM in Australia and offer it for export.

From the electrical interface, the signal is then sent for asynchronous to synchronous conversion (if required), then to a rate adapter. The rate adapter feeds signals to a time division multiplexer offering two-channel operation, and the final multiplexed signal then drives the unit's 2B1Q data pump.

According to General Datacomm, byte interleaving in the internal multiplexer maintains channel integrity.

The unit's two channel capability means, for example, that it can support simultanous PC and mainframe wide area networking, or mixed voice and data where the user already has bandwidth management equipment.

Another feature of the MDTU is that it has been designed to simplify the user's choice of system; customers need only decide whether they require stand-alone or rack mount installation, which electrical interfaces are wanted, and what adapter cables are needed (DB-25 on the SDM to V.35, X.21 or G.703 at the user's equipment).

Datamatic is also working to make it easier for potential customers to decide whether the MDTU suits their applications. Since the unit can be used wherever dc continuity exists between nodes, inter-exchange connections are supported.

Datamatic has compiled a database of exchanges between which dc continuity is maintained, and of the inter-exchange path length, so that the MDTU's current 7km (and future 12km) limit is not exceeded.

As long as the wire length is within the MDTU's limits, Datamatic says the unit is suitable for a wide range of interconnectivity applications, including interconnecting LANs, low scan rate videoconferencing, CAD/CAM file transfers and campus networking.

Datamatic, 16 Suakin Street, Pymble 2073.

Hypertec moves into NICs

Better known as a manufacturer of PC enhancement and upgrade products, Sydney-based Hypertec has moved into the networking market with a range of Token Ring adapter cards for IBM PCs and compatibles.

HyperRing uses generic IBM drivers supplied with the network operating system to communicate on IBM Token Ring networks.

Both 4M bits/s and 16M bits/s speeds are supported, with two versions in the range. The HyperRing Classic suits IBM PCs, XTs, ATs and compatibles, while the HyperRing MC is designed for Micro Channel machines.

Marketing manager Katherine Doric said the HyperRing range is "the first of a number of new products we will be progressively introducing to broaden our product range."

To ensure 100% compatibility with IBM's Token Ring networking standard, the two cards use both the IBM chipset and processor microcode.

"The HyperRing products can be installed and maintained in exactly the same way as the IBM product," Ms Doric said, adding that the cards can be directly substituted into any network currently using IBM's cards.

A socket that accepts the standard IBM remote program load ROM allows the cards to be configured for server-booted workstations.

HyperRing provides on-board support for UTP cabling in addition to the standard STP connector, allowing the cards to be used in any Token Ring environment.

"Support of UTP via the on-board media filter also makes it possible to achieve real cost savings by obviating the use of external media filters, which can typically add $80 to $100 to the cost of connecting a single workstation to the network," Ms Doric said.

HyperRing Classic also supports auxiliary interrupt levels to eliminate the interrupt clashes sometimes associated with ISA bus machines. If auxiliary interrupts are to be used, the card must be plugged into a 16 bit ISA slot.

Hypertec, Unit 4, 112-118 Talavera Road, North Ryde 2113.

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120 on Information Card

Comms Award to DosFax Pro

by Richard Chirgwin

Although Communications & Office Technology '92 in Melbourne had fewer entries than the Sydney show for Communications Engineer's Best Communications Product, there was still stiff competition at the top for the choice of the winner.

Ultimately, availability, ease of use (resulting in greater user productivity) and cost effectiveness won the day for Bitware, distributor of DosFax Pro.

DosFax Pro is the DOS version of Delrina's popular WinFax Pro (which is an award winner in the US in its own right).

The DOS edition is designed to provide the same kind of PC-based fax functionality as its Windows brother, for both send and receive applications.

It operates as a TSR in the user machine, with the application occupying just 75Kb of memory in the user machine.

As with any worthwhile fax application, DosFax Pro gives the user a range of fax options, including the choice of single recipients or broadcasts, an internal phonebook (with the ability to import entries from any comma delimited ASCII database), reception in the background or direct to the printer, and fax scheduling.

Faxes can be viewed on screen, rotated (for documents received upside down), printed and exported to a variety of file formats, all directly from DosFax Pro's graphical view screen.

However, perhaps more important for the judging of the award, DosFax Pro is particularly easy to use, whether sending faxes using DosFax Pro Administrator or from within a user's own application.

Communications Engineer congratulates Bitware as the Australian distributor for this product.

Another attention-grabbing entry for the award was on display at the ACS Computer stand.

Compro's LaserMedia CD fileserver is a product which aims to make multimedia applications more accessible to networks, by replacing the CD jukebox with a single server carrying multiple CD-ROM drives.

The advantages of this approach are faster access to data held on the CD. and simpler administration.

The server would be particularly suitable for networks using a large number of applications that are distributed on CD, since program installation would be much simpler, and hard disk space could be preserved for user data.

Currently, the CD fileserver can load up to seven drives, and by the time it is shipping late this year, ACS expects to be able to configure systems carrying up to 14 CD-ROM drives.

DosFax Pro: Bitware, phone (03) 532 2274, fax (03) 532 2279.

LaserMedia CD fileserver: ACS, phone (03) 335 4100, fax (03) 335 4215.

Scitec expands NetComm portfolio

Scitec has expanded its reseller relationship with NetComm to cover NetComm's full range of modems.

Under an agreement signed in late May, Scitec will now be selling NetComm modems as part of its local and wide area networking solutions.

According to Hartmut Boedefeld, Scitec's managing director and CEO for Australia and Asia Pacific, the deal is part of his company's strategy of "offering our clients a total solution for their networking needs, including hardware, training and technical support."

NetComm's national sales manager Peter Morton said the reseller relationship gives his company new access into the corporate and government sectors, in addition to the company's traditional distribution through PC dealer outlets.

Compaq Peripherals targets network printing

Compaq has created a Peripherals Division to take advantage of the growth of the networked printer market.

The division is devoted to the development and marketing of Compaq printer and printer-related products. First products will be released later this year. According to the company's president and CEO Eckhard Pfeiffer, the move will allow Compaq to take advantage of its brand awareness, worldwide distribution channels, established service and support, and experience in networking to get quick access the customers in this field.

Compaq estimates that the worldwide printer market to be worth more than $US30 billion by 1995, and has been preparing its entry into this market for more than three years with market research and technology development.

New Age seeks new lease of life for LANLink Pro

by Richard Chirgwin

New Age Business Systems is planning to raise its profile in the low-end LAN market with the recent launch of LANLink Pro.

On show in Australia for the first time at PC '92 in Melbourne, LANLink Pro is the latest release of The Software Link's (TSL) peer-to-peer operating system. As well as the zero-slot connectivity traditionally supported by LANLink, the new release supports networking using Ethernet cabling standards. Although available in Australia for some time, LANLink has had a relatively low profile in the market, according to TC Yee, managing directorof New Age Business Systems.

Since taking over the Australian distribution of the product, Mr Yee says his company estimates there to be as many as 5000 users Australia-wide. New Age is currently embarking on a program to find those users and encourage them to register with New Age Business Systems.

As well as offering a temporary amnesty to allow unregistered users to register, the company has established a user newsletter which is being distributed to all registered users, and is paying support visits to newly registered users.

To support the growth of LANLink Pro, New Age is introducing an authorised installer program, with free but compulsory training, along with a range of dealer incentive campaigns.

As well as expanding its media support, LANLink Pro has been engineered to provide better support for mixed networks, including those using Novell NetWare, Microsoft Windows, and TSL's own PC-MOS DOS-based multiuser operating system.

This allows networks to be configured where workgroups are created using PC-MOS, interconnected to multiple LANLink users, and bridged to NetWare for the corporate backbone (see diagram).

"LANLink offers the combination of true peer-to-peer connectivity with hardware independence," said Diana Holland of The Software Link.

"This means that users can connect their network through an Ethernet card, RS232 ports, or printer ports and receive the same level of connectivity."

This also provides an easy way to connect machines such as laptops without the need for special interfaces to gain access to the network, she said.

"LANLink Professional is a complete rewrite of LANLink. It's a wholly new product, not just an upgrade of the existing code," Ms Holland said.

Initial Ethernet card support covers the NE-1000, NE-2000 and compatible cards, and the operating system includes an IBM DOS 3.x NETBIOS interface to support applications written to use this protocol.

LANLink Professional supports Windows 3.1, MS-DOS and PC-DOS versions 3.x and above, and the latest release (version 5.01) of TSL's PC-MOS multiuser operating system, also launched at PC '92 in Melbourne.

According to Mr Yee, LANLink Pro is the only network operating system that can use Windows as the server mechanism, allowing true networked Windows application.

The integration of LANLink Pro with PC-MOS allows non-dedicated servers to support multiple tasks and/or multiple users. Mr Yee says that his company will be seeking new users particularly in vertical markets whose applications most suit the LANLink/PC-MOS combination.

For example, he says the system offers a highly cost effective alternative solution for point-of-sale computer systems, and for databases where many users are making frequent short hits to the database.

As well as offering competitive performance with other peer-to-peer systems such as NetWare Lite and LANtastic, Mr Yee says LANLink Pro will be priced aggressively. The multi-user version is expected to retail at around $300 per user in Australia, while the DOS/Windows version should sell for around $150-160 per user.

"With TSL's support, we expect to make a substantial impact in the low-end LAN market," Mr Yee said.

New Age Business Systems, Suite 302, 398 Chapel Road. Bankstown 2200.

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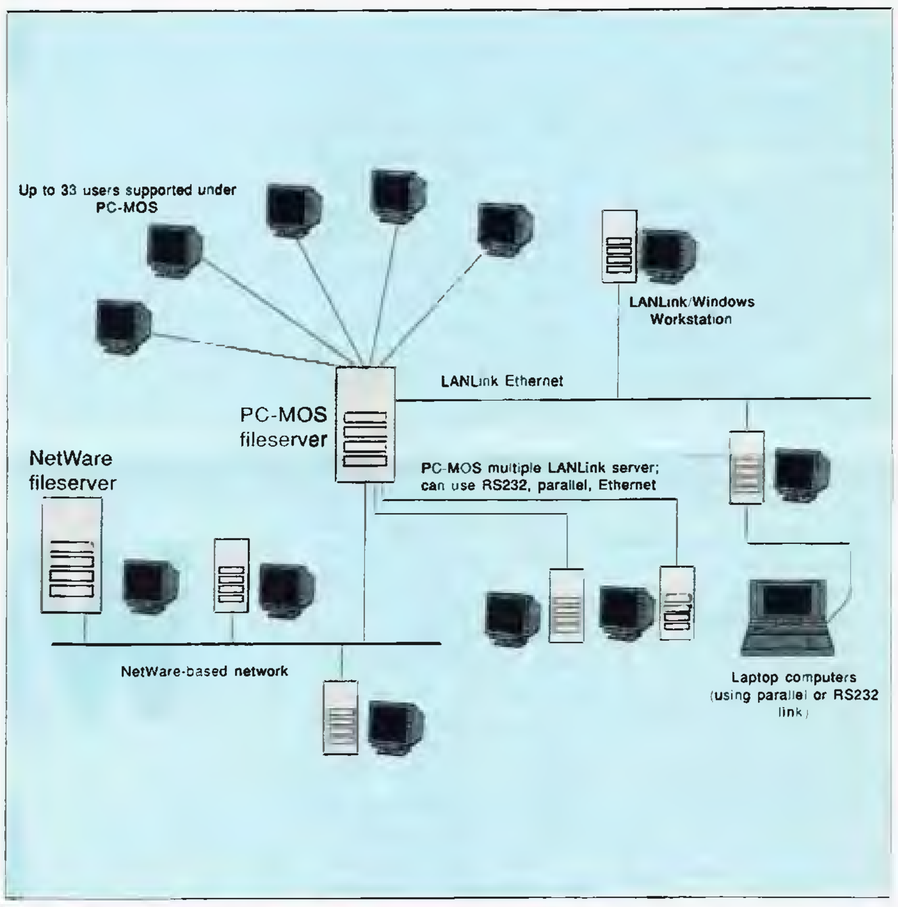
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Proteon seeks to de-mystify bridge/router installation

by Richard Chirgwin

Ease of use is the key to the latest release from bridge/routing vendor Proteon.

According to Rob Willis, area manager for Australia/New Zealand, the company's DNX 300 Series (departmental network exchange) is designed to overcome the difficulty percieved in bridges and routers.

In doing this, the DNX 300 should help make bridge/router products, traditionally handled mainly by specialist system integrators, more accessible to the installer and reseller markets, he said.

"Most bridge/router products have the reputation of not being easy to install and configure," Mr Willis said at the release of the DNX 300m, first of what will be a family of products.

To overcome this, he said Proteon's engineers had "worked hard on the user interface."

The result of this work is as close to "plug-and-play" as a bridging router can become, Mr Willis believes.

"For example, its QuickStep installation system allows the DNX 300m to be configured and operational in around ten to fifteen minutes, using a question-and-answer format."

This feature has already received favourable reactions from the US networking industry and computer press, he said.

Other features designed to make the DNX 300m easy to install and use include automatic hardware configuration which takes care of the ports used, media types connected, and the type of network being used, as well as automatic cable testing.

"Resellers have not traditionally been heavy promoters of bridge/router products.

"Giving users and resellers easier access to the system's functionality should help overcome barriers to the use of these products," Mr Willis said.

As well as these ease of use features, the DNX 300m is designed to be supplied pre-configured according to the intended application.

This, Mr Willis says, produces a unit which can be used "straight out of the box".

He believes such a system as the DNX 300m will find favour with Australian customers, in applications where many remote sites are connected to a central host (such as in the banking sector).

The simplicity of the system could allow it to be delivered to the remote site and installed without requiring a specialist to visit the site.

This, combined with the strong growth in Proteon's Token Ring core market, could create a large market for the DNX 300 series.

Despite the simplicity which Proteon says is the core of the DNX 300m, the bridging router maintains wide protocol support and high performance.

All major bridging and routing protocols are supported, including OSPF and PPP for intelligent bridge/routing in an open systems environment, and the device offers performance specified at 5000 packets per second.

Using Proteon's TSA (transportable software architecture), the DNX 300m supports more than 17 protocols, including Novell IPX, TCP/IP, DECnet IV+, OSI, AppleTalk 1 and 2, Apollo Domain, XNS, Banyan Vines, transparent and source route bridging, SDLC/HDLC relay via TCP/IP, and SRB tunnel via TCP/IP.

Both Ethernet and Token Ring (4M and 16M bits/s) LAN interfaces are available, with support for a wide range of WAN services including T1/E1, X.25 and Frame Relay.

Remote loading using flash memory simplifies and reduces the cost of software upgrades, and cabling support is integrated into the DNX 300m, eliminating the need for media adapters.

Serial interfaces offered include RS232, RS449, V.35 and X.21, operating at up to 2.048M bits/s; AUI and 10Base-T connectors are offered for Ethernet applications, while STP and UTP connections are supported in 4M and 16M bits/s Token Ring networks; and a DB25 connector offers RS232 for connecting a console to the bridge.

A variety of I/O configurations are supported by the DNX 300m. In local applications, it can be configured with two Ethernet ports: two Token Ring ports; or one of each. For remote applications, the bridge/router supports two high speed serial ports, and one LAN port which can be either Ethernet or Token Ring.

One of the first enhancements planned in the DNX 300 range is to give the second serial line the ability to support dial-up connections.

This will allow users to configure remote sites with one serial line connected to a leased line to provide the primary path to the host system, with the dial-up line cutting the cost of a redundant backup circuit.

The bridge is also designed for easy migration into larger systems.

For most remote site applications, Proteon expects the stand-alone version to be the configuration of choice.

However, the operational module of the DNX 300m can be removed from the stand-alone chassis and installed into the company's Series 90 intelligent network concentrator.

Migration to a hub-based configuration requires no additional investment, a feature which Proteon says is consistent with its aims to minimise cost of ownership.

As a slot in the Series 90 concentrator, the DNX 300m allows mixed protocols and network types to be easily supported.

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